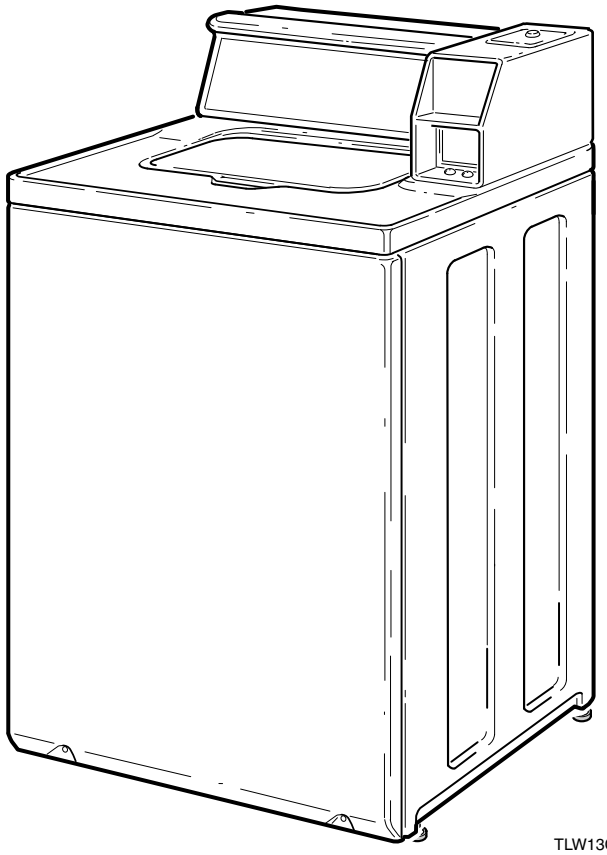
Commercial Toploader Washers

Refer to Page 5 for Model Numbers



TLW13C

Troubleshooting

Alliance Laundry Systems

www.comlaundry.com

Part No. 202202
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Section 1
Safety Information

Throughout this manual and on machine decals, you will find precautionary statements ("CAUTION," "WARNING," and "DANGER") followed by specific instructions. These precautions are intended for the personal safety of the operator, user, servicer and those maintaining the machine.

⚠ DANGER
Danger indicates an imminently hazardous situation that, if not avoided, will cause severe personal injury or death.

WARNING
Warning indicates a hazardous situation that, if not avoided, could cause severe personal injury or death.

CAUTION
Caution indicates a hazardous situation that, if not avoided, may cause minor or moderate personal injury or property damage.

Additional precautionary statements ("IMPORTANT" and "NOTE") are followed by specific instructions.

IMPORTANT
The word "IMPORTANT" is used to inform the reader of specific procedures where minor machine damage will occur if the procedure is not followed.

NOTE
The word "NOTE" is used to communicate installation, operation, maintenance or servicing information that is important but not hazard related.

In the interest of safety, some general precautions relating to the operation of this machine follow.

WARNING

- **Failure to install, maintain and/or operate this product according to the manufacturer's instructions may result in conditions which can produce serious injury, death and/or property damage.**
- **Do not repair or replace any part of the product or attempt any servicing unless specifically recommended or published in this Service Manual and unless you understand and have the skills to carry out the servicing.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the product is properly grounded and to reduce the risk of fire, electric shock, serious injury or death.**

W006R2

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WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the washer before servicing.**
- **Never start the washer with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer is properly grounded.**

W003

WARNING

Repairs that are made to your products by unqualified persons can result in hazards due to improper assembly or adjustments subjecting you or the inexperienced person making such repairs to the risk of serious injury, electrical shock or death.

W007

WARNING

If you or an unqualified person perform service on your product, you must assume the responsibility for any personal injury or property damage which may result. The manufacturer will not be responsible for any injury or property damage arising from improper service and/or service procedures.

W008

NOTE: The WARNINGS and IMPORTANT INSTRUCTIONS appearing in this manual are not meant to cover all possible conditions and situations that may occur. Common sense, caution and care must be exercised when installing, maintaining or operating the washer.

Always contact your dealer, distributor, service agent or the manufacturer about any problems or conditions you do not understand.

Locating an Authorized Servicer

Alliance Laundry Systems is not responsible for personal injury or property damage resulting from improper service. Review all service information before beginning repairs.

Warranty service must be performed by an authorized technician, using authorized factory parts. If service is required after the warranty expires, Alliance Laundry Systems also recommends contacting an authorized technician and using authorized factory parts.

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Section 2
Introduction

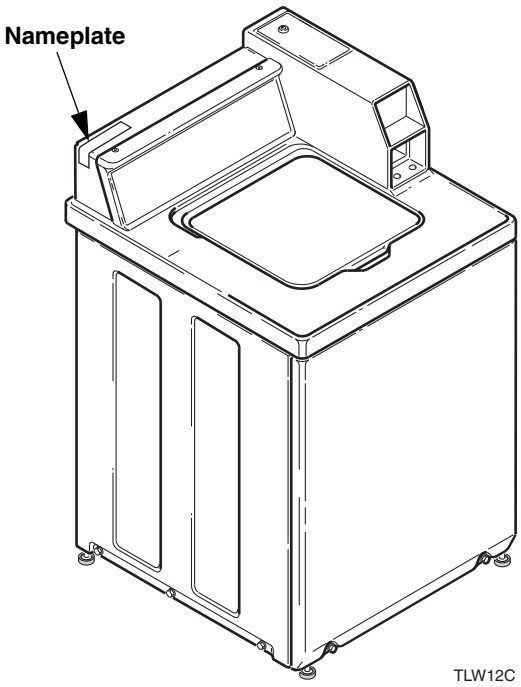
Customer Service

If literature or replacement parts are required, contact the source from whom the machine was purchased or contact Alliance Laundry Systems at (920) 748-3950 for the name and address of the nearest authorized parts distributor.

For technical assistance, call (920) 748-3121.

Nameplate Location

When calling or writing about your product, be sure to mention model and serial numbers. Model and serial numbers are located on nameplate(s) as shown.



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Model Identification

Information in this manual is applicable to these washers.

HWNLX2SP111CW01
HWNLE2SP111CW01
HWNLE2SP111CWNA
HWNLY2SP111CW01

SWNLC2PP111TW01
SWNLC2PP111TWNA
SWNLC2SP111TQ01
SWNLC2SP111TW01
SWNLC2SP111TWNA
SWNLX2SP111TW01
SWNLY2PP111TW01
SWNLY2PP111TWNA
SWNLY2SP111TW01
SWNLY2SP111TWNA

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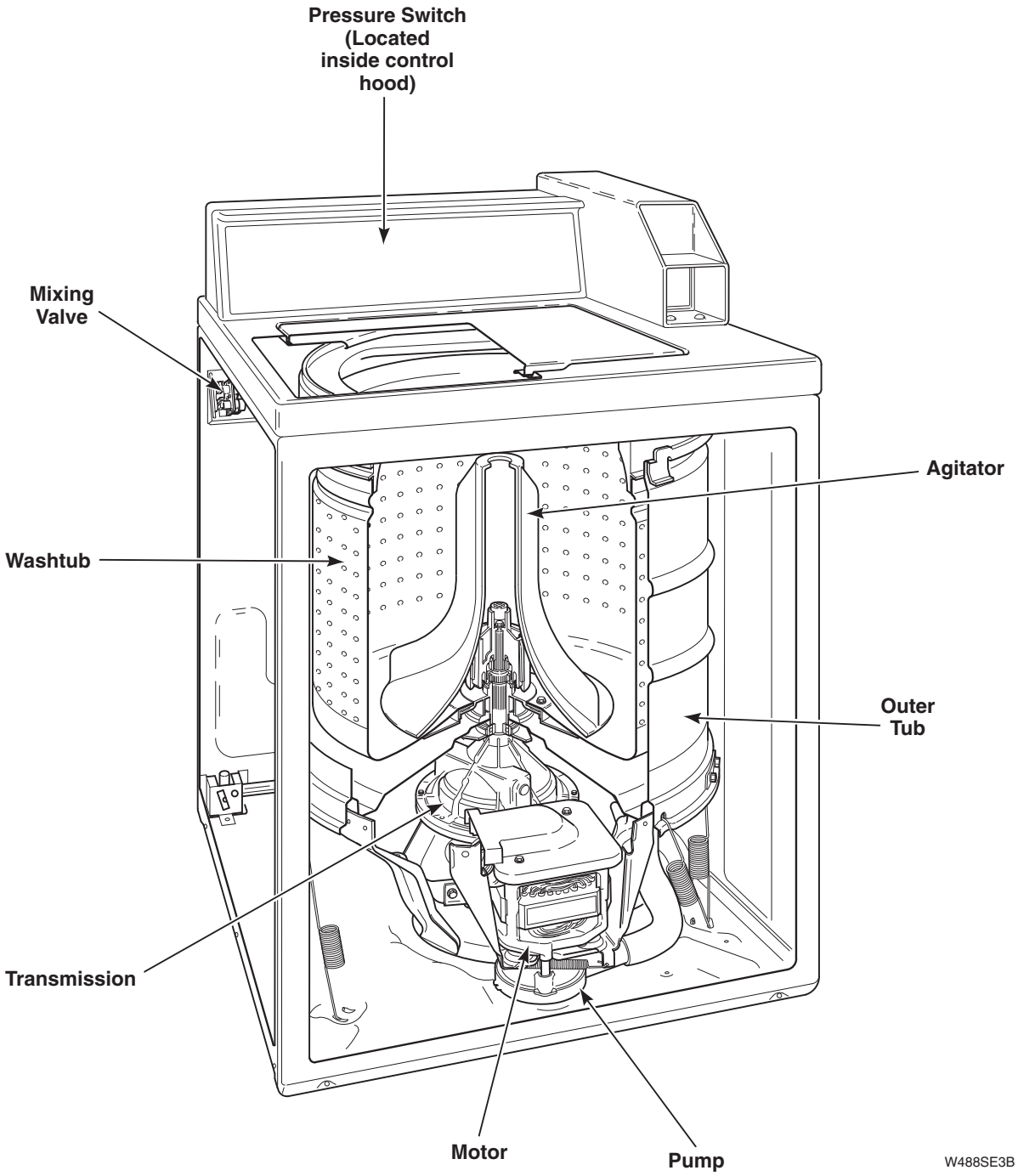
Theory of Operation



The cycle begins with a wash fill. The water temperature is determined by the temperature selected. While water fills the washtub, a column of air is trapped in a pressure bulb and hose. The air pressure continues to increase as the washtub fills with water until it is great enough to activate the pressure switch. The pressure switch then causes the wash fill to stop and wash agitation to begin. However, the lid must be closed for the washer to agitate or spin.

The washer uses a reversing type motor, a special drive belt and an idler assembly. The idler assembly applies tension to the outside of the drive belt.

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During agitation, the motor runs in the counterclockwise direction. The spring tension on the idler pulley applies the tension required to reduce the slack on the drive belt and maintain maximum belt to motor pulley contact. This eliminates belt slippage and ensures an efficient wash action, even with extra large loads.

The belt drives the transmission drive pulley in the counterclockwise direction. The pulley drives the helix which is splined to the input shaft of the transmission. This causes the input shaft to turn inside of a roller clutch which is pressed into the transmission cover. This roller clutch acts as a bearing in the counterclockwise direction allowing the transmission gears to operate. The transmission's rack and pinion gear design produces a 210 degree agitation stroke at the output shaft of the transmission which drives the agitator. The brake assembly remains locked during the agitation mode since no pressure is applied to it by the transmission drive pulley.

After the wash agitation is completed, the timer advances into the first spin. During spin, the motor reverses turning in the clockwise direction to spin the water out of the washtub. The combination of water, washtub and load weight cause the drive belt tension on the idler side of the belt to overtake the idler spring pressure allowing the belt to become slack on the opposite side. This reduces the belt to pulley contact and allows slipping between the belt and pulley.

As water is removed by the pump and the momentum of the washtub increases, the idler spring tension gradually overcomes the belt tension removing the belt slack. This eventually increases the belt to pulley contact until maximum spin speed is achieved.

The drive pulley turns clockwise riding up the ramps of the helix, exerting pressure on the brake and forcing it to release from brake pads. The helix drives the input shaft of the transmission, and when the input shaft turns in the clockwise direction the roller clutch locks onto the shaft causing the entire transmission assembly to turn. None of the gears in the transmission are operating at this time. The hub of the washtub is splined to the transmission tube and rotates with the transmission assembly. The centrifugal force created by the spinning washtub causes water to be extracted from the clothes.

Water is introduced during the first spin to "SPRAY" the garments and remove suds from them. The initial spin is followed by rinse agitation to rinse away any detergent residue. The washer fills and then agitates like the wash portion of the cycle. Following rinse agitation, a final spin extracts the rinse water from the clothes preparing them for the dryer.

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Section 3
General Troubleshooting

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the washer before servicing.**
- **Never start the washer with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer is properly grounded.**

W003

IMPORTANT: Refer to appropriate model wiring diagram for aid in testing washer components.

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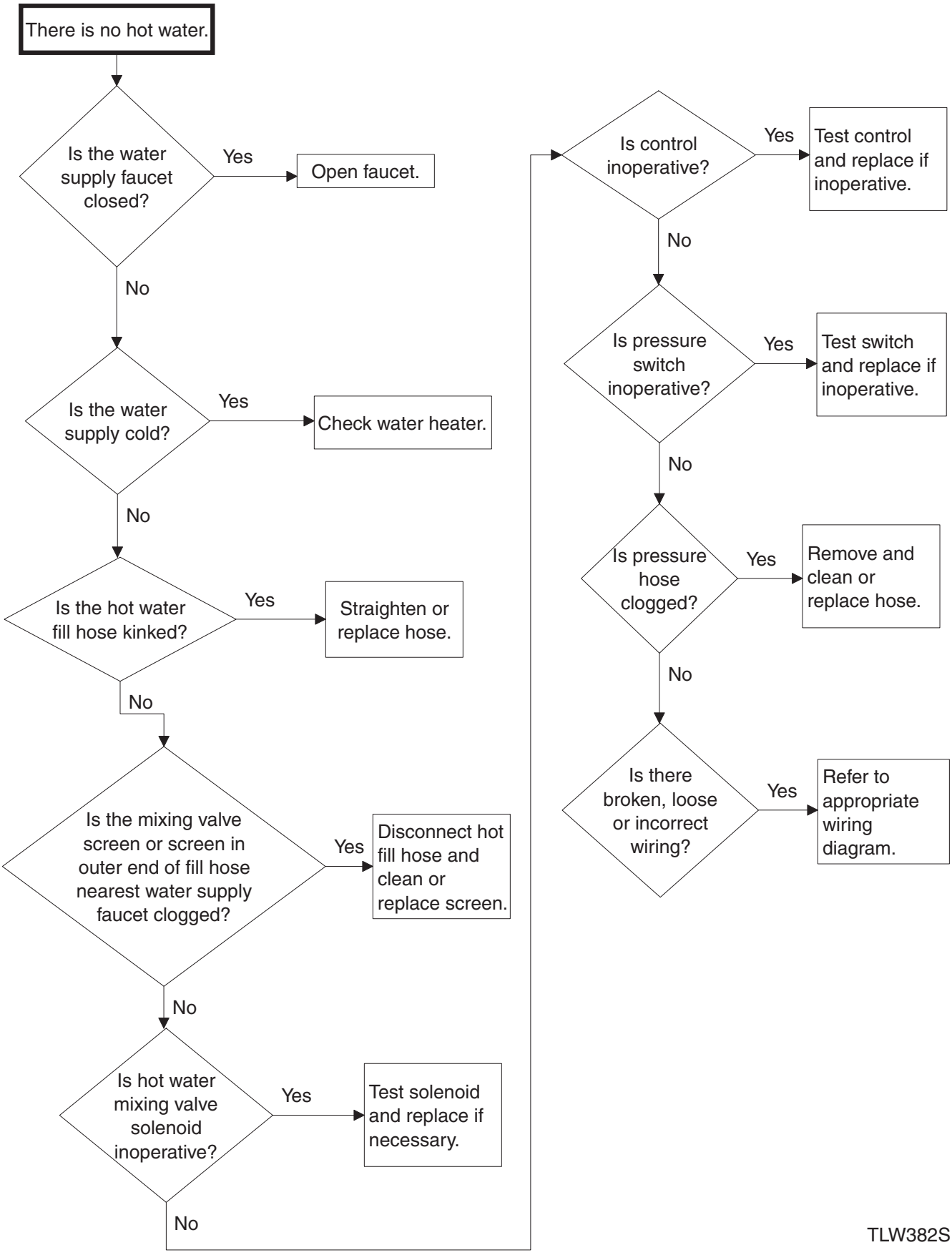
1. No Hot Water



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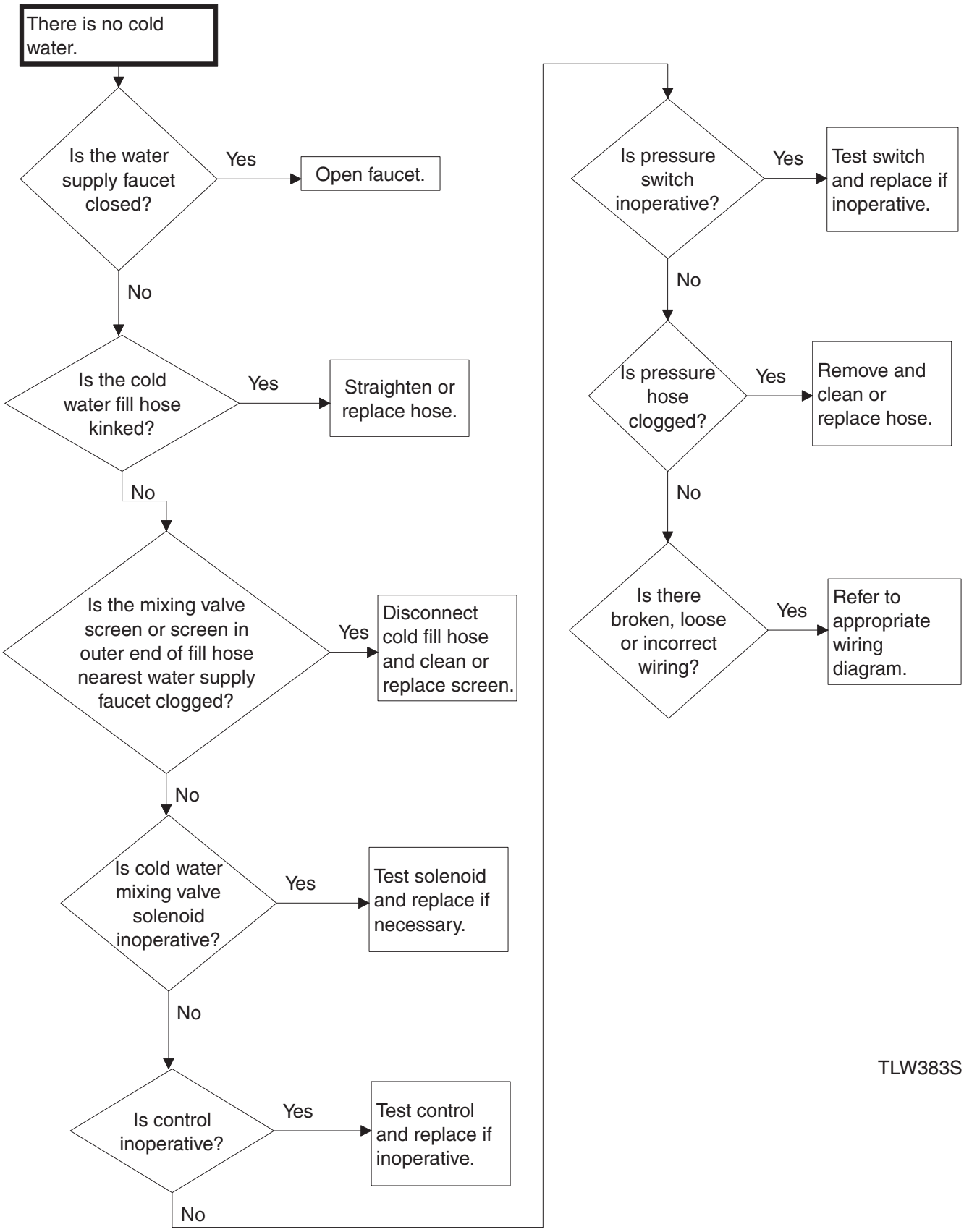
2. No Cold Water



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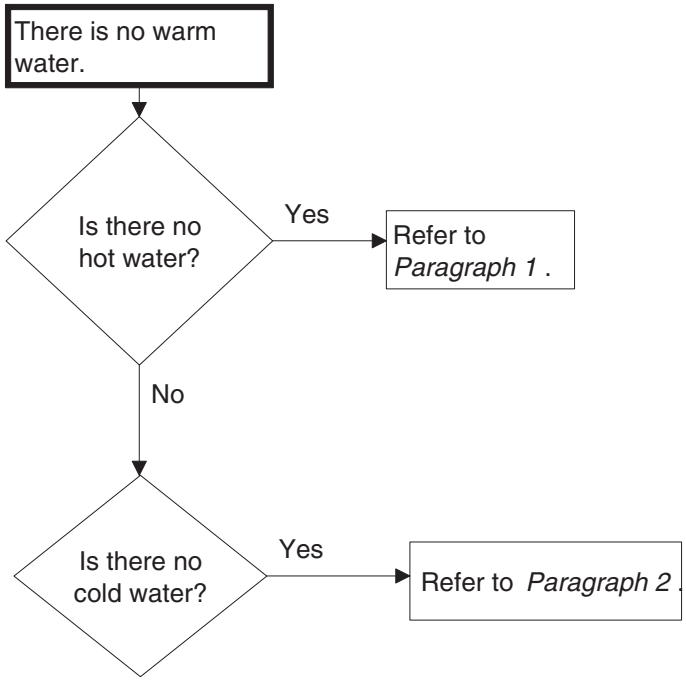
3. No Warm Water



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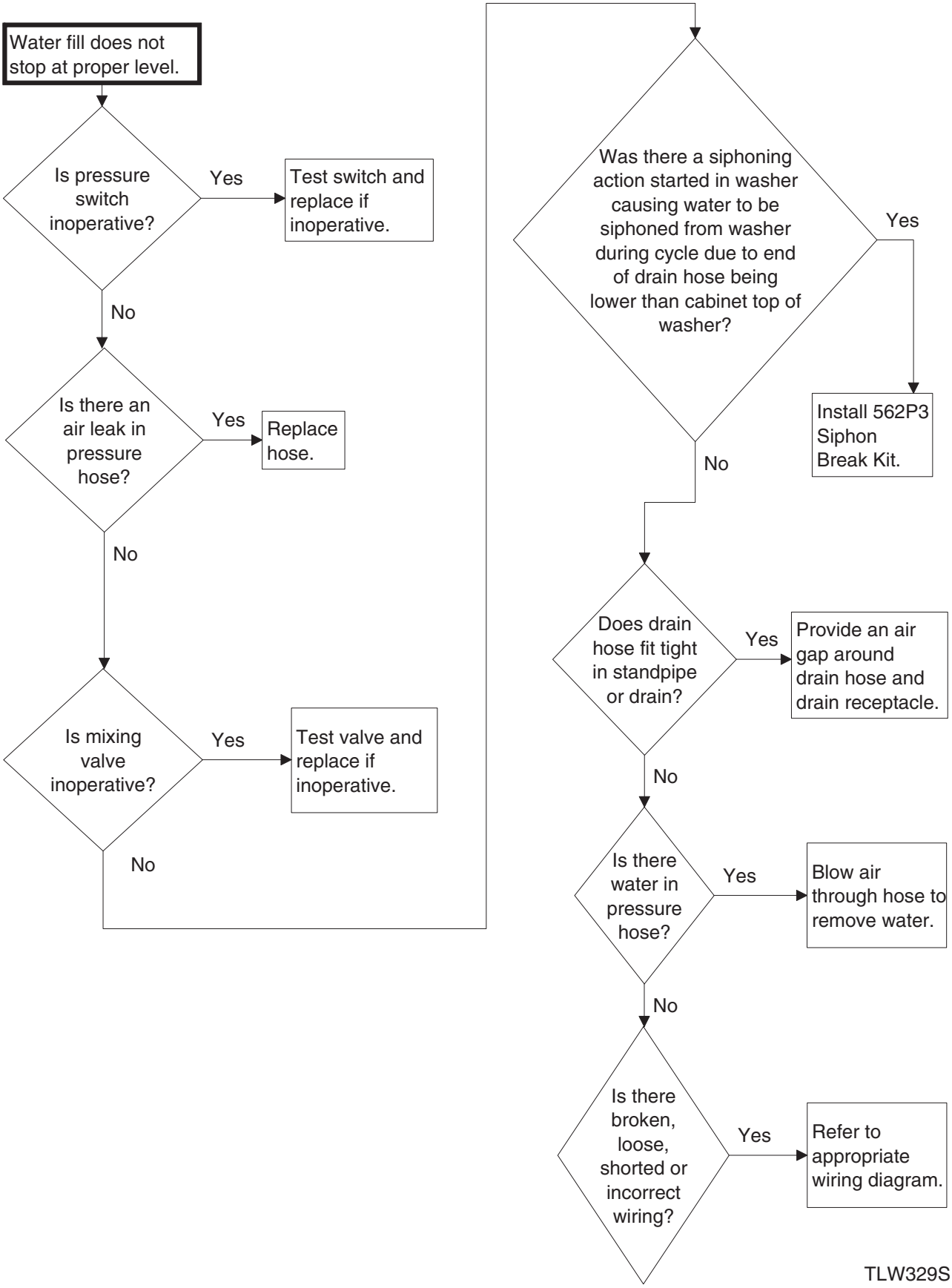
4. Water Fill Does Not Stop At Proper Level


Water fill does not stop at proper level.
Is pressure switch inoperative?
Yes
Test switch and replace if inoperative.
No
Is there an air leak in pressure hose?
Yes
Replace hose.
No
Is mixing valve inoperative?
Yes
Test valve and replace if inoperative.
No
Was there a siphoning action started in washer causing water to be siphoned from washer during cycle due to end of drain hose being lower than cabinet top of washer?
Yes
Install 562P3 Siphon Break Kit.
No
Does drain hose fit tight in standpipe or drain?
Yes
Provide an air gap around drain hose and drain receptacle.
No
Is there water in pressure hose?
Yes
Blow air through hose to remove water.
No
Is there broken, loose, shorted or incorrect wiring?
Yes
Refer to appropriate wiring diagram.

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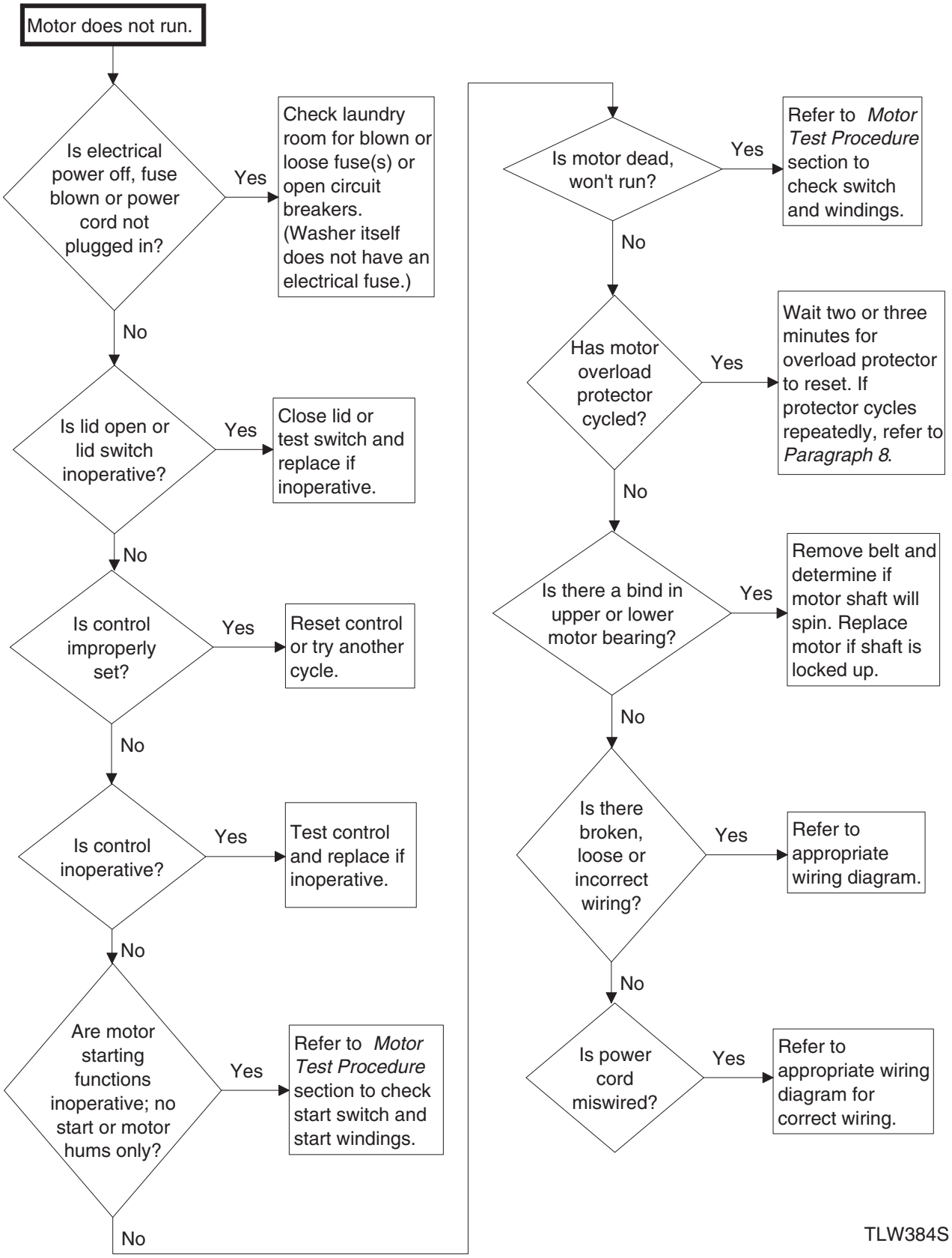
5. Motor Does Not Run


Motor does not run.
Is electrical power off, fuse blown or power cord not plugged in?
Yes
Check laundry room for blown or loose fuse(s) or open circuit breakers. (Washer itself does not have an electrical fuse.)
No
Is lid open or lid switch inoperative?
Yes
Close lid or test switch and replace if inoperative.
No
Is control improperly set?
Yes
Reset control or try another cycle.
No
Is control inoperative?
Yes
Test control and replace if inoperative.
No
Are motor starting functions inoperative; no start or motor hums only?
Yes
Refer to Motor Test Procedure section to check start switch and start windings.
No
Is motor dead, won't run?
Yes
Refer to Motor Test Procedure section to check switch and windings.
No
Has motor overload protector cycled?
Yes
Wait two or three minutes for overload protector to reset. If protector cycles repeatedly, refer to Paragraph 8.
No
Is there a bind in upper or lower motor bearing?
Yes
Remove belt and determine if motor shaft will spin. Replace motor if shaft is locked up.
No
Is there broken, loose or incorrect wiring?
Yes
Refer to appropriate wiring diagram.
No
Is power cord miswired?
Yes
Refer to appropriate wiring diagram for correct wiring.

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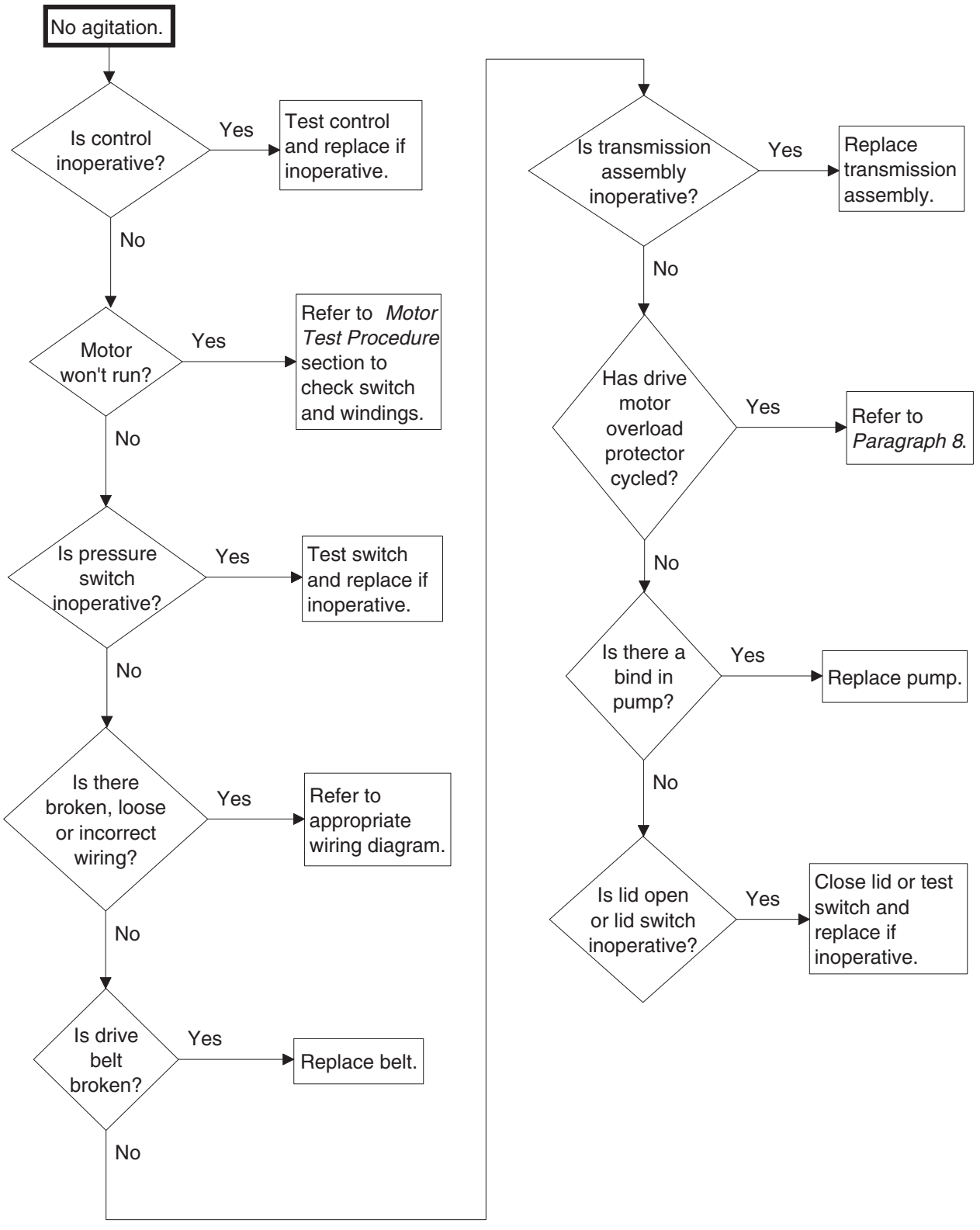
6. No Agitation



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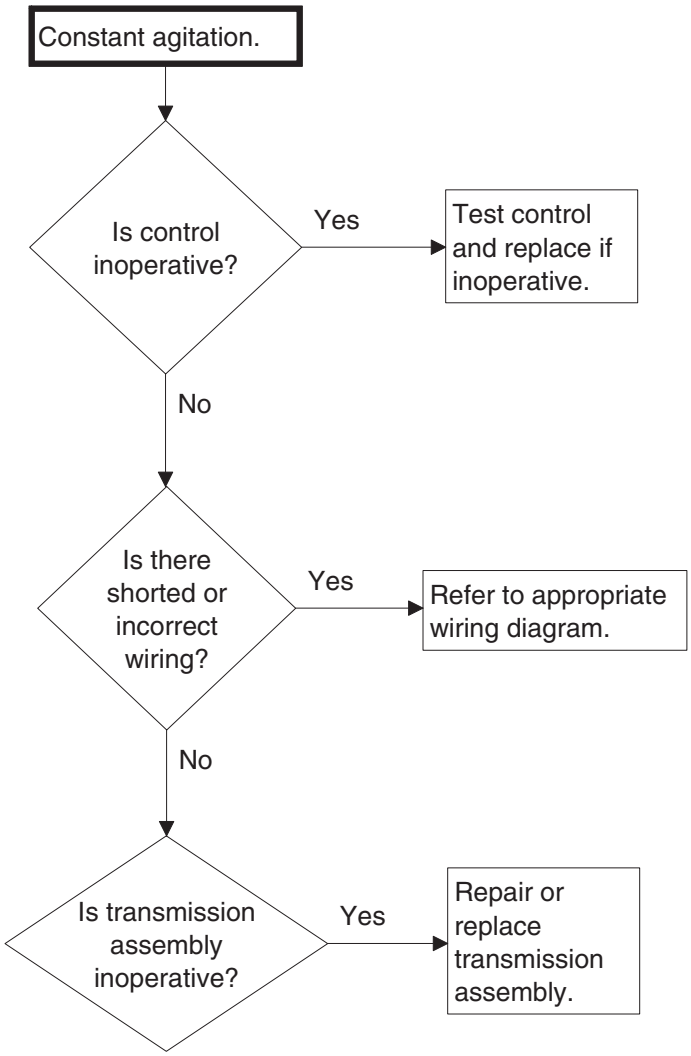
7. Constant Agitation



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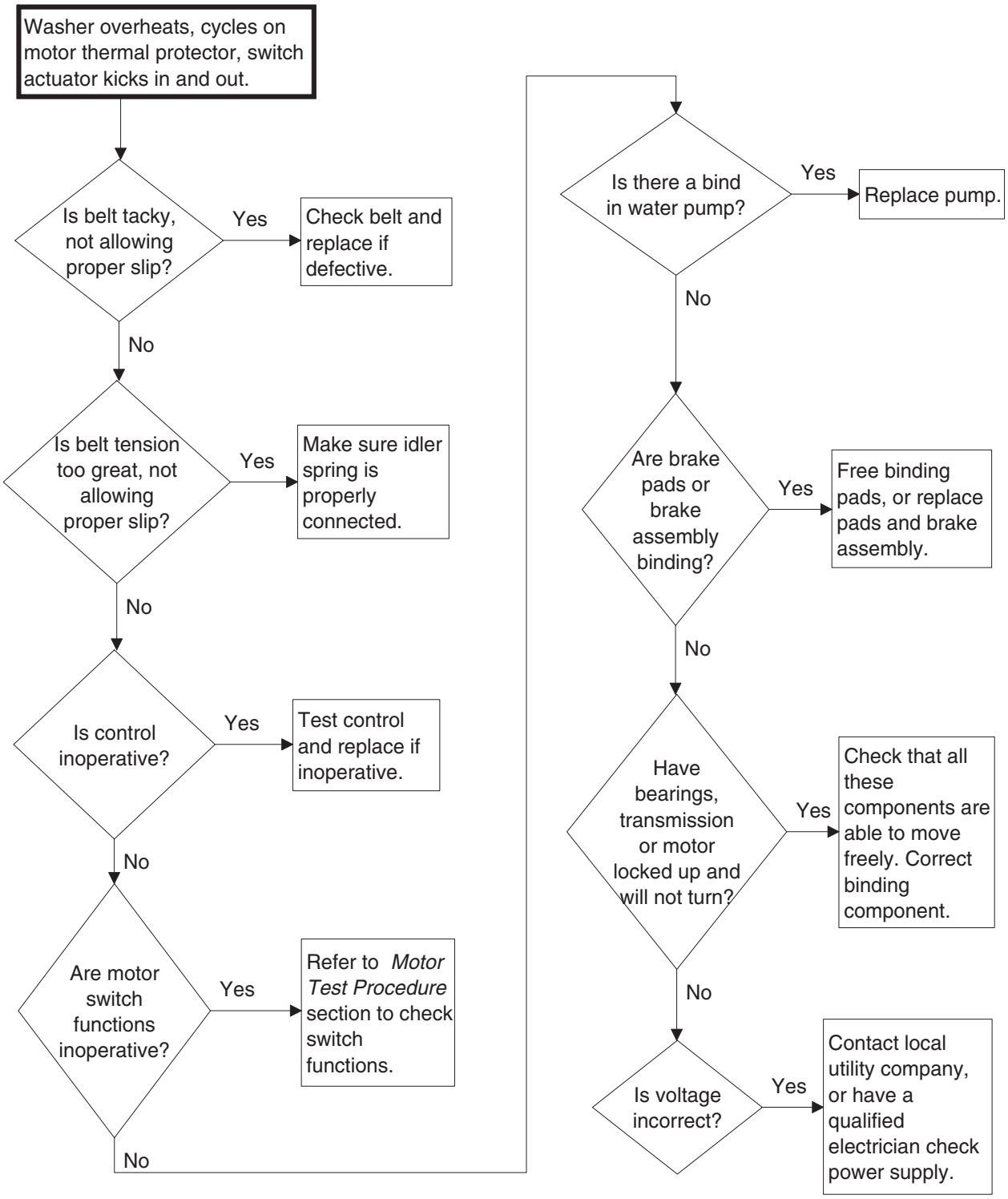
8. Washer Overheats, Cycles On Motor Thermal Protector, Switch Actuator Kicks In And Out


Washer overheats, cycles on motor thermal protector, switch actuator kicks in and out.
Is belt tacky, not allowing proper slip?
Yes
Check belt and replace if defective.
No
Is belt tension too great, not allowing proper slip?
Yes
Make sure idler spring is properly connected.
No
Is control inoperative?
Yes
Test control and replace if inoperative.
No
Are motor switch functions inoperative?
Yes
Refer to *Motor Test Procedure* section to check switch functions.
No
Is there a bind in water pump?
Yes
Replace pump.
No
Are brake pads or brake assembly binding?
Yes
Free binding pads, or replace pads and brake assembly.
No
Have bearings, transmission or motor locked up and will not turn?
Yes
Check that all these components are able to move freely. Correct binding component.
No
Is voltage incorrect?
Yes
Contact local utility company, or have a qualified electrician check power supply.

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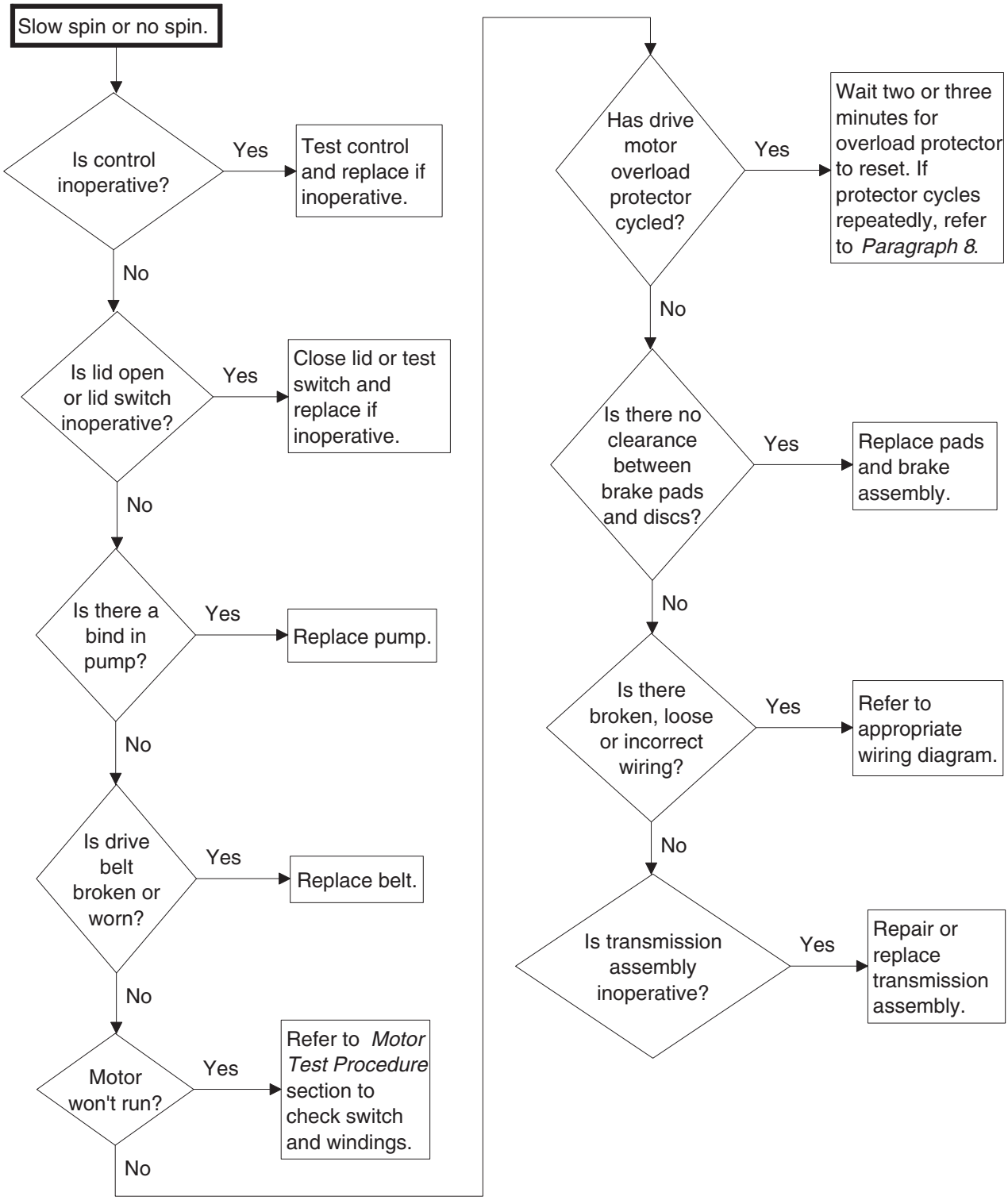
9. Slow Spin Or No Spin



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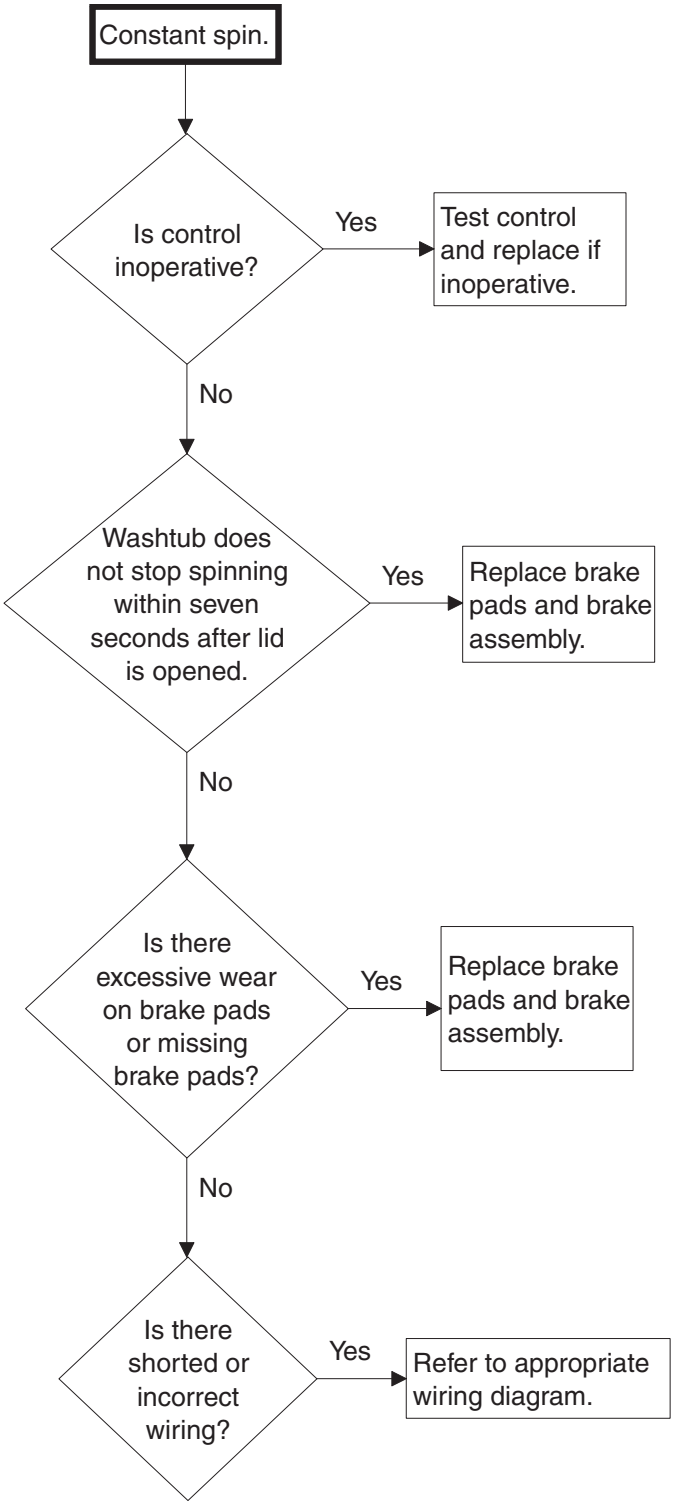
10. Constant Spin


Constant spin.
Is control inoperative?
Yes
Test control and replace if inoperative.
No
Washtub does not stop spinning within seven seconds after lid is opened.
Yes
Replace brake pads and brake assembly.
No
Is there excessive wear on brake pads or missing brake pads?
Yes
Replace brake pads and brake assembly.
No
Is there shorted or incorrect wiring?
Yes
Refer to appropriate wiring diagram.

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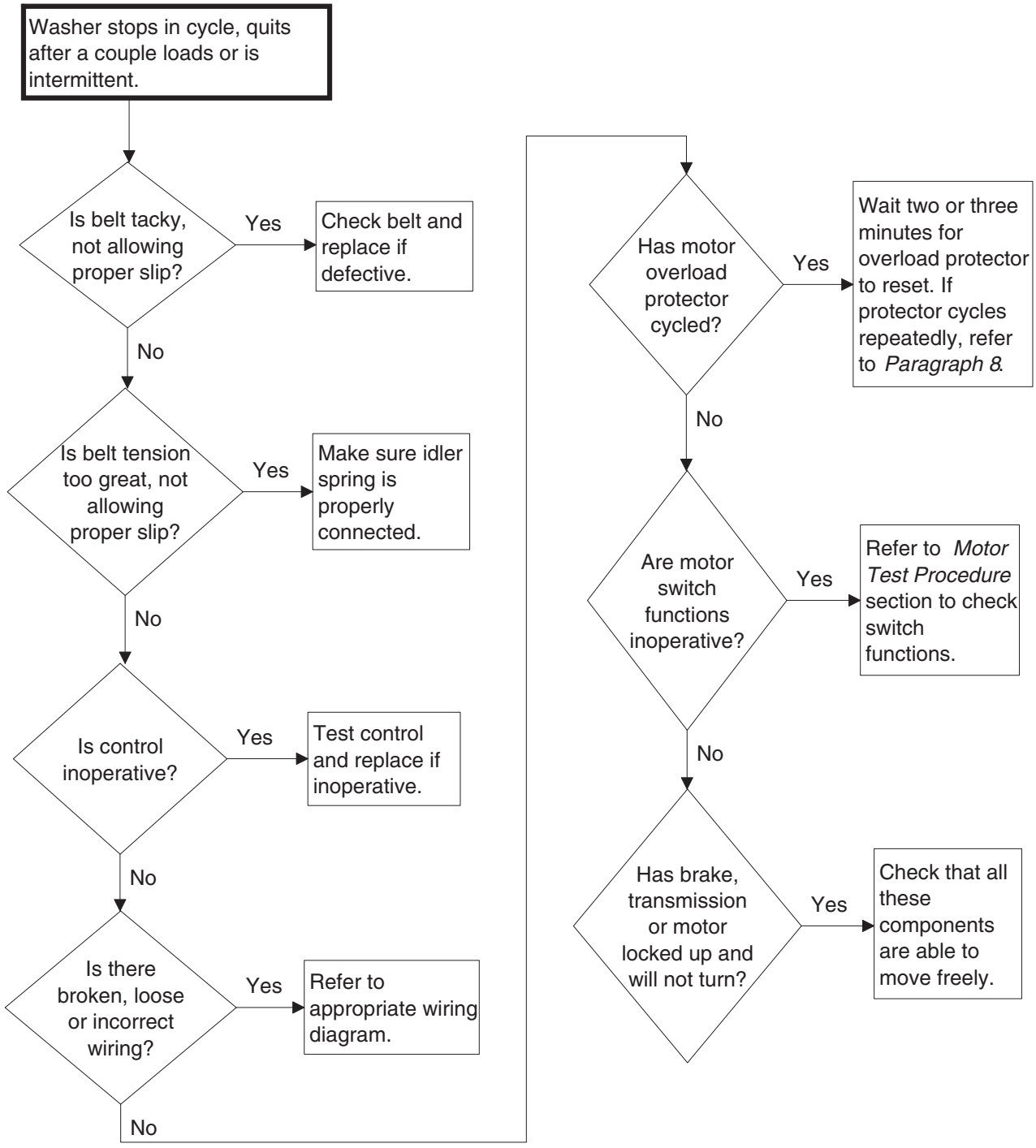
11. Washer Stops In Cycle; Quits After A Couple Loads; Is Intermittent


Washer stops in cycle, quits after a couple loads or is intermittent.
Is belt tacky, not allowing proper slip?
Yes
Check belt and replace if defective.
No
Is belt tension too great, not allowing proper slip?
Yes
Make sure idler spring is properly connected.
No
Is control inoperative?
Yes
Test control and replace if inoperative.
No
Is there broken, loose or incorrect wiring?
Yes
Refer to appropriate wiring diagram.
No
Has motor overload protector cycled?
Yes
Wait two or three minutes for overload protector to reset. If protector cycles repeatedly, refer to Paragraph 8.
No
Are motor switch functions inoperative?
Yes
Refer to Motor Test Procedure section to check switch functions.
No
Has brake, transmission or motor locked up and will not turn?
Yes
Check that all these components are able to move freely.

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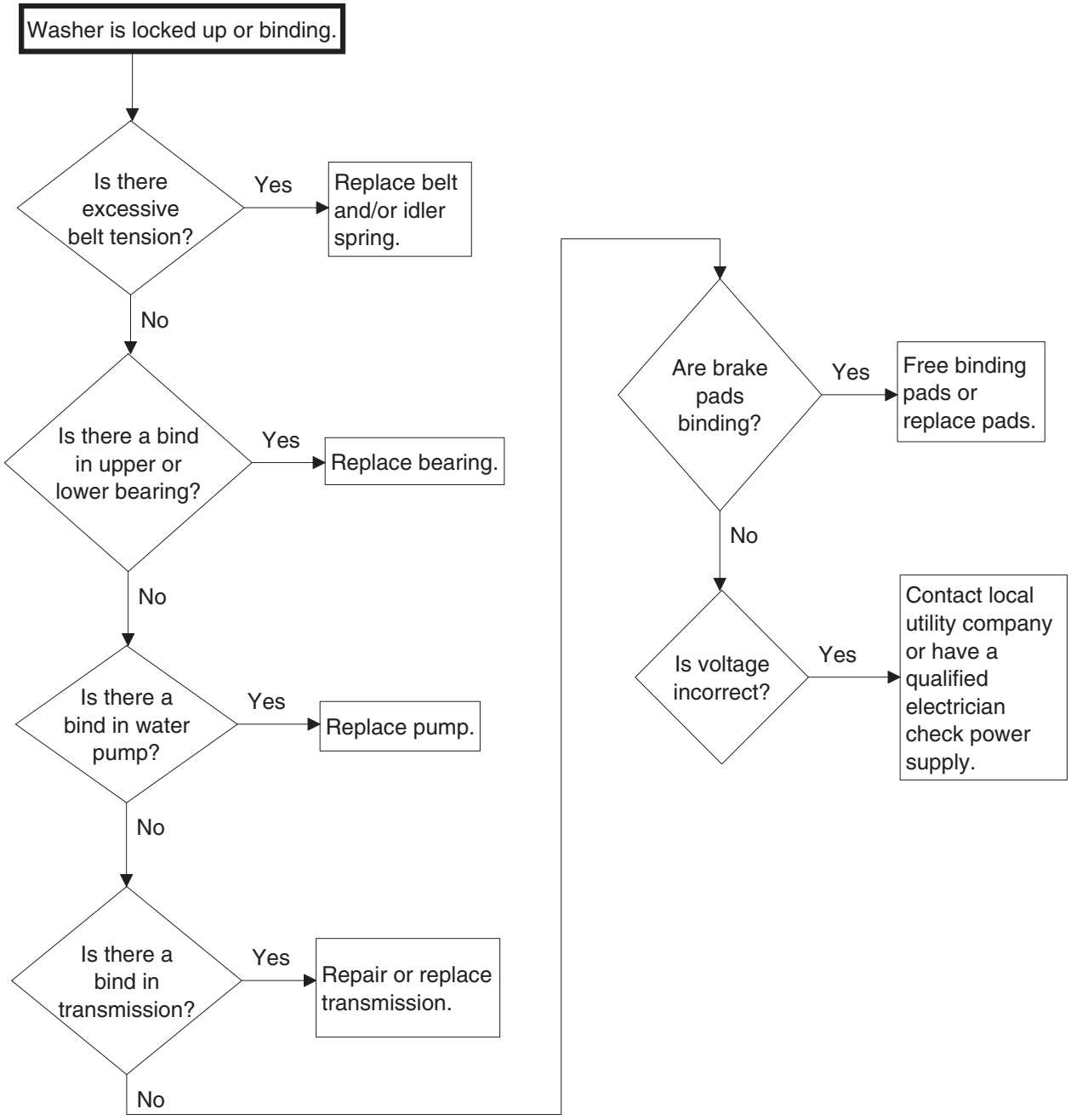
12. Washer Is Locked Up Or Binding



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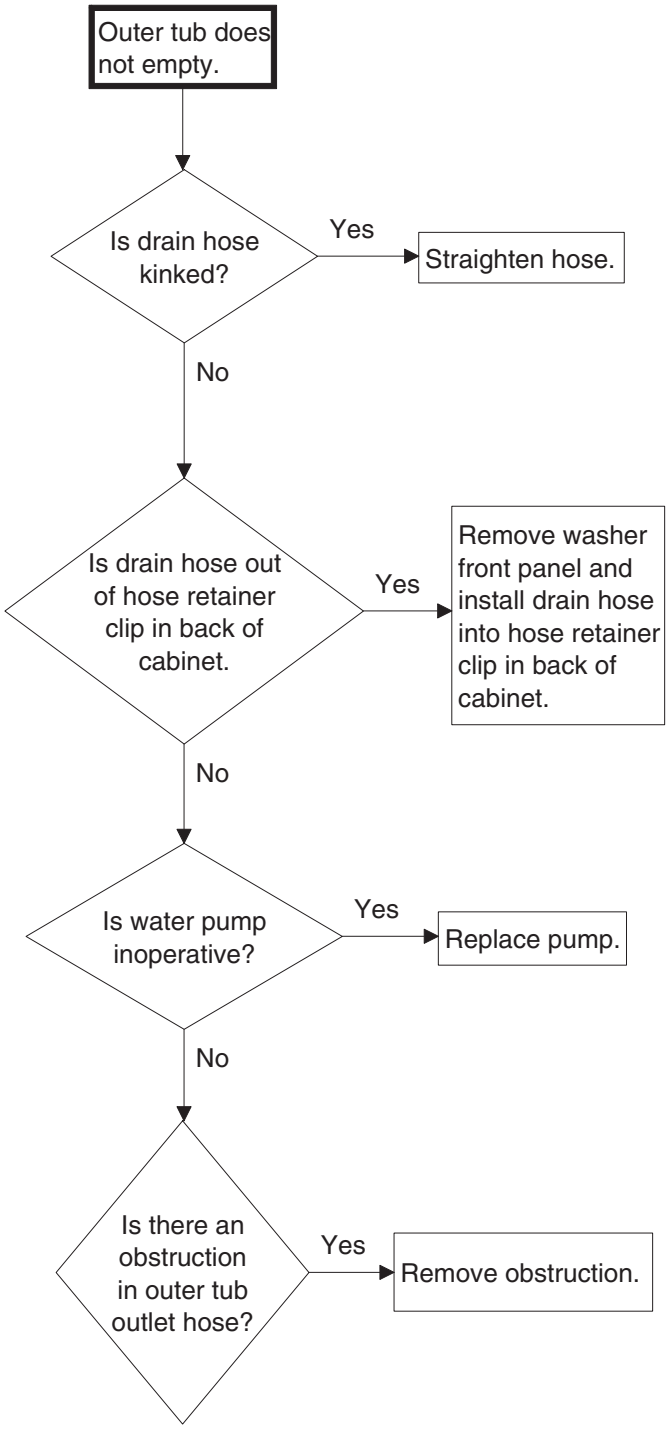
13. Outer Tub Does Not Empty



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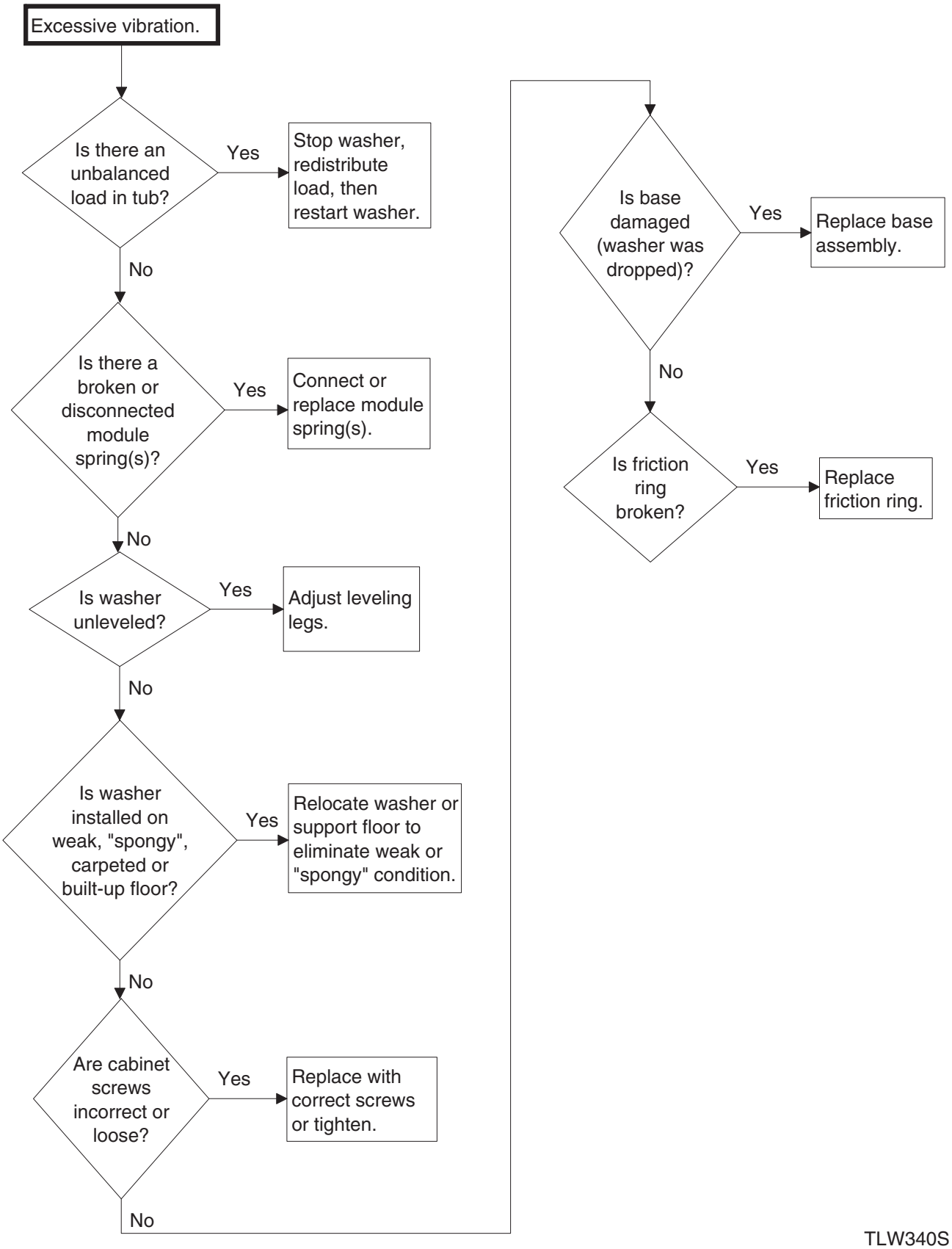
14. Excessive Vibration



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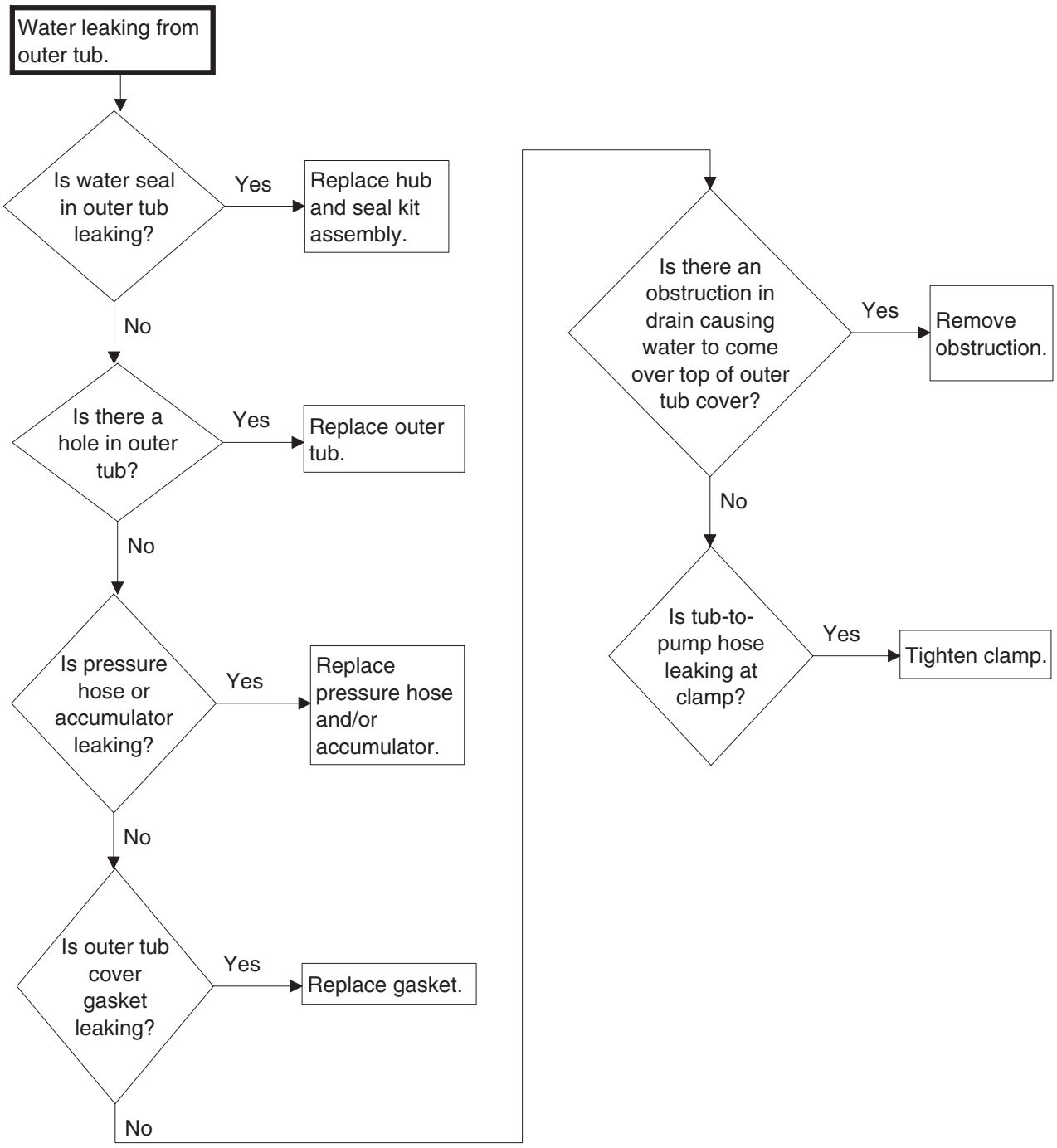
15. Water Leaking From Outer Tub



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16. Troubleshooting Coin Drop

a. Non-Electronic Coin Drops:

When coin is placed into coin slot, the coin should roll down drop and be heard dropping into coin vault. If coin does not fall into coin vault or if coin drop sensor does not register that coin has been entered, follow troubleshooting instructions on the following page. Refer to *Figure 1* for path that coin follows when working properly.

IMPORTANT: Never use oil to correct coin drop problems. Oil residue will prevent coins from rolling properly.

IMPORTANT: Do not bend or damage mechanical parts within coin drop.

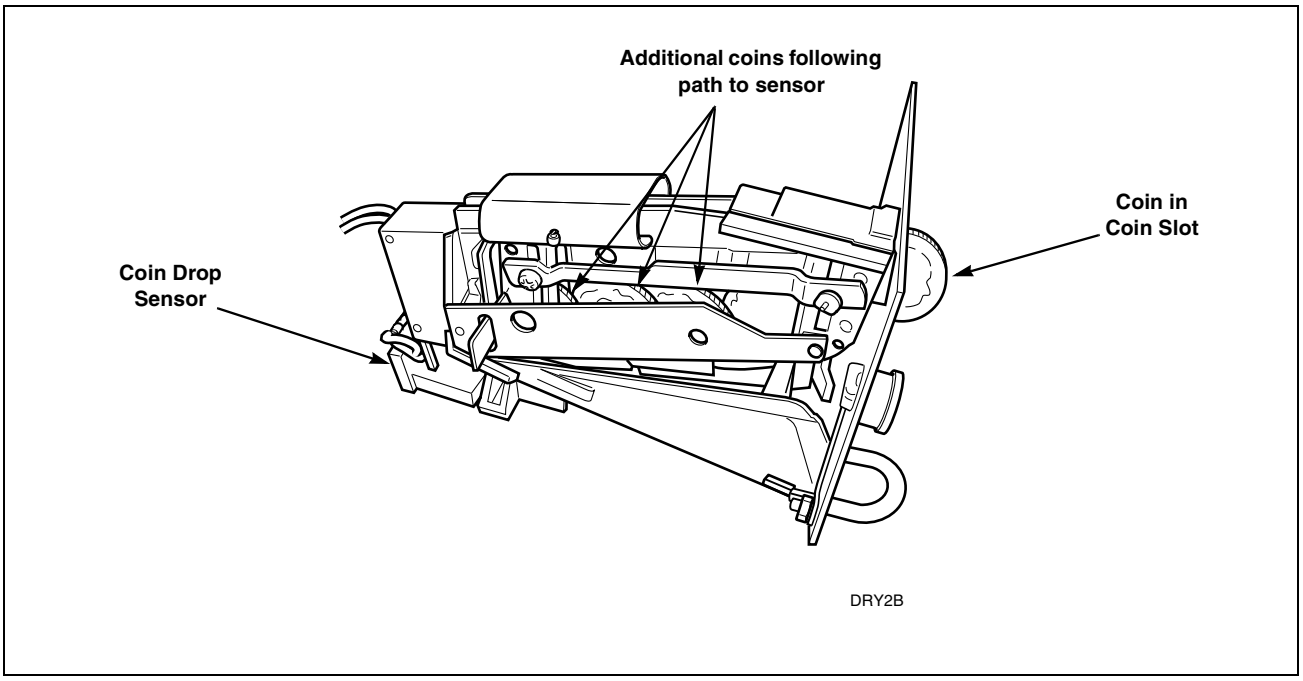

Figure 1

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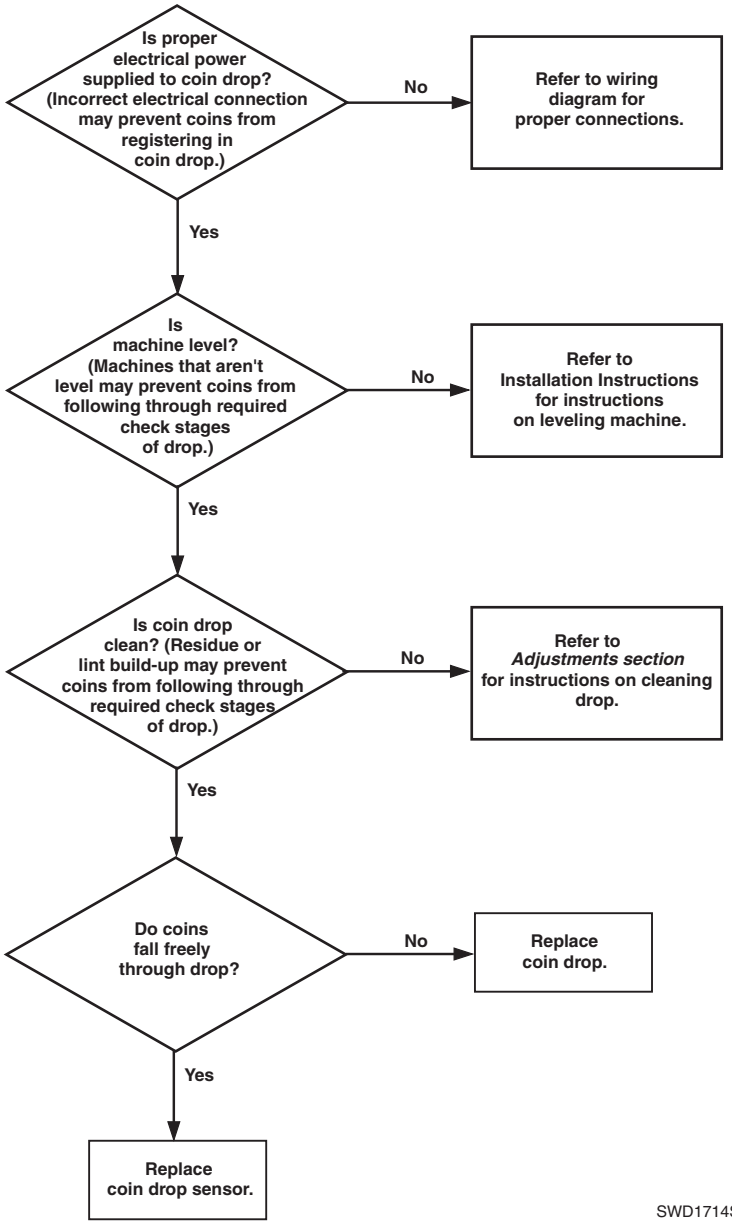
Troubleshooting Coin Drop


Is proper electrical power supplied to coin drop? (Incorrect electrical connection may prevent coins from registering in coin drop.)
No
Refer to wiring diagram for proper connections.
Yes
Is machine level? (Machines that aren't level may prevent coins from following through required check stages of drop.)
No
Refer to Installation Instructions for instructions on leveling machine.
Yes
Is coin drop clean? (Residue or lint build-up may prevent coins from following through required check stages of drop.)
No
Refer to *Adjustments section* for instructions on cleaning drop.
Yes
Do coins fall freely through drop?
No
Replace coin drop.
Yes
Replace coin drop sensor.
SWD1714S

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b. Electronic Coin Drops:

If coin drop is not accepting coins, perform the following:

(1) Clean coin drop. Refer to *Paragraph 62.*
(2) Test and replace tension spring using the following instructions.

Remove Coin Drop From Machine

(1) Disconnect electrical power to machine and drop.
(2) Remove coin drop from machine.

Test Tension Spring

(1) Push coin return button to open and close coin drop cover to clear possible coin jams. Refer to *Figure 2*.

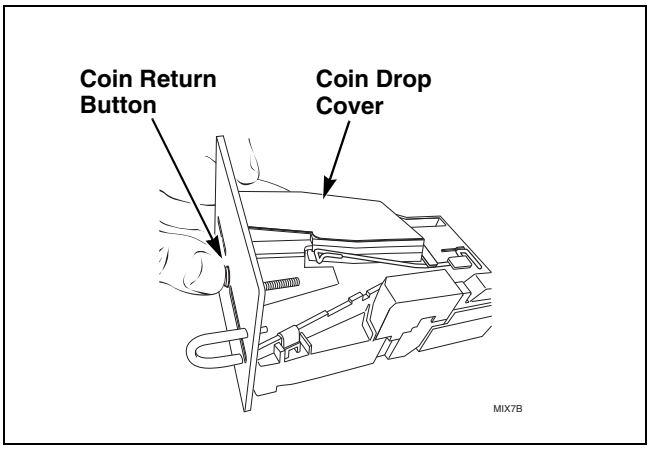

Figure 2

(2) Manually hold down coin drop cover and insert coin. Refer to *Figure 3*.

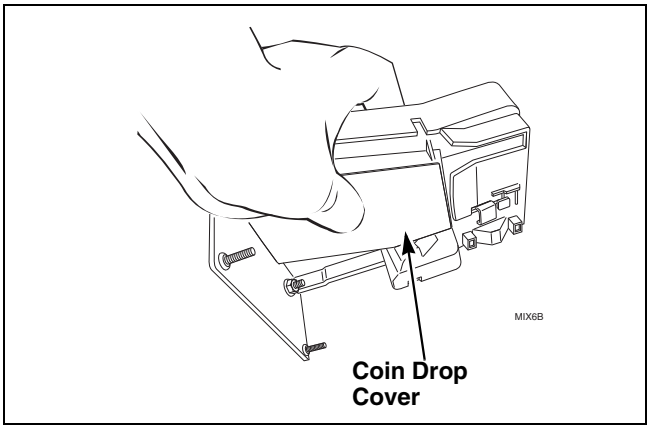

Figure 3

(3) If coin drop now operates properly, replace tension spring using instructions on following pages.

Replace Tension Spring

(1) Move tension spring downward until cover catch is free. Refer to *Figure 4*.

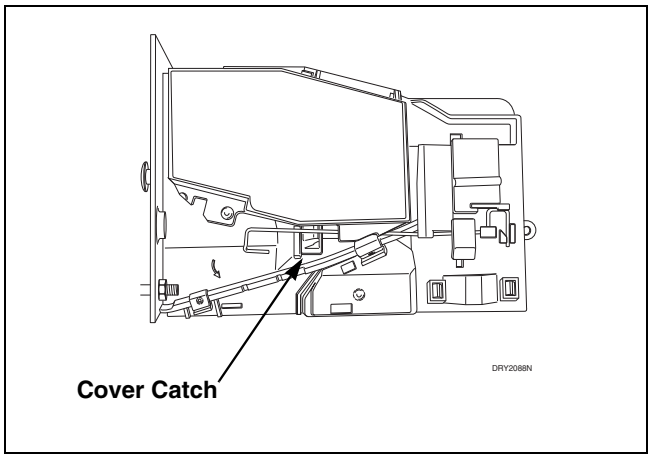

Figure 4

(2) Open cover for coin drop.
(3) Place a small flathead screwdriver under right side of tension spring and lift up. Refer to *Figure 5*.

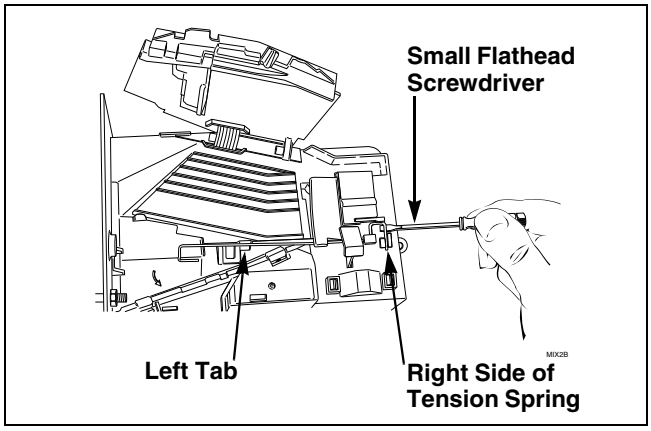

Figure 5

(4) Use screwdriver to move spring approximately 3 mm to left.
(5) Lift spring over left tab. Refer to *Figure 5*.

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(6) Rotate spring clockwise, 40 to 60 degrees, until it is free from right tabs. Refer to *Figure 6*.

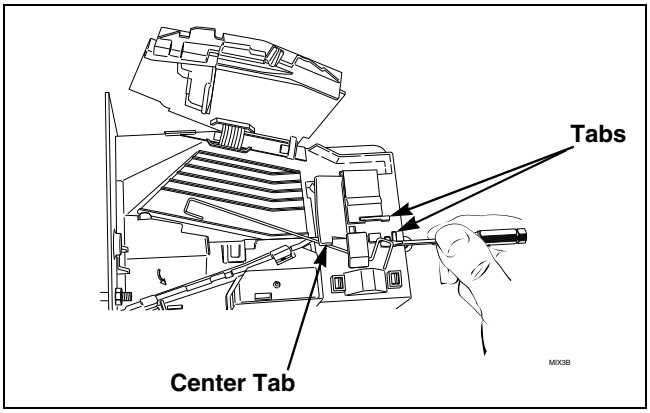

Figure 6

(7) Use screwdriver to remove spring from center tab. Refer to *Figure 6*.
(8) Lift spring, with attached clip, off drop.
(9) Remove clip from spring. Refer to *Figure 7*.

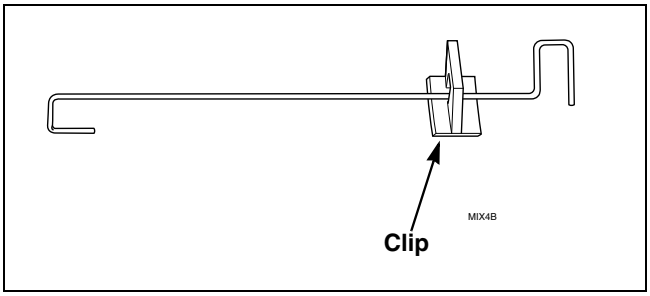

Figure 7

(10) Attach clip to new tension spring, Part No. 209/00598/02.
(11) Place clip, installed on spring, in slot on coin drop. Refer to *Figure 8*.

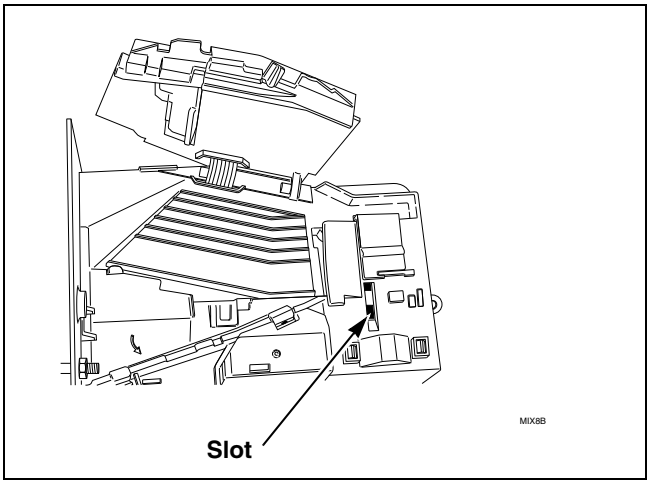

Figure 8

(12) Use a small flathead screwdriver to push spring under center tab. Refer to *Figure 9*.

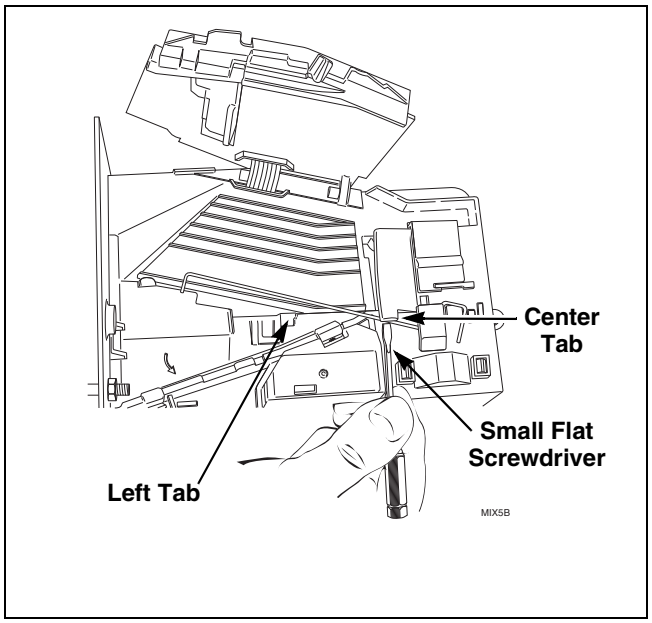

Figure 9

(13) Lift spring gently to place in position under left tab.
(14) Push spring to right until it snaps into position. Refer to *Figure 5*.
(15) Close coin drop cover.
(16) Move tension spring over cover catch. Refer to *Figure 4*.

Reinstall Coin Drop Into Machine

(1) Reinstall coin drop into machine.
(2) Reconnect electrical power to machine and drop.
(3) Add a coin to drop to verify that coin drop is operating properly and that electrical connection is working properly.

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Troubleshooting

Electronic Control

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the washer before servicing.**
- **Never start the washer with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer is properly grounded.**

W003

IMPORTANT: Refer to appropriate model wiring diagram for aid in testing washer components.

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17. Error Code Listing

Errors beginning with "EI" refer to external device Infrared communication errors. Errors beginning with "EC" refer to card reader errors. All other errors refer to machine errors.

Display	Description	Cause/Corrective Action
EI01	Transmission Failure	Communication failure. Re-aim external device and try again.
EI02	Device Time-out	Communication failure. Re-aim external device and try again.
EI03	Invalid Command Code	Incorrect machine type. Before downloading, ensure data is for current machine type.
EI04	Expecting Upload Request	Communication failure. Re-aim external device and try again.
EI05	Invalid or Out-of-Range Data	Incorrect machine type. Before downloading, ensure data is for current machine type.
EI09	CRC-16 Error	Communication failure. Re-aim external device and try again.
EI0A	Invalid Machine Type	Incorrect machine type. Before downloading, ensure data is for current machine type.
EI0C	Time-out Exceeded	Communication error. Re-aim external device and try again.
EI0E	Encryption Error	Incorrect machine type. Before downloading, ensure data is for current machine type.
EI0F	Invalid Wake-up or Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
EC02	Time-out Error	Communication failure. Try card again.
EC03	Invalid Command Code	Incorrect machine type. Before downloading, ensure data is for current machine type.
EC05	Invalid or Out-of-Range Data	Incorrect machine type. Before downloading, ensure data is for current machine type.
EC11	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
EC18	No Communication	Card reader initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
EC19	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. If error persists, replace control or network board.
ALrn	Break-in Alarm Error	Service the door or coin vault switches.
oFF	Break-in Alarm Shutdown Error	Service the door or coin vault switches.

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Display	Description	Cause/Corrective Action
EFL	Fill Error	Pressure switch fails to open in 30 minutes (or other programmed length of time) in any fill agitate cycle.
Edr	Drain Error	Water sensed at end of wash spin step or final spin step.
Err	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.

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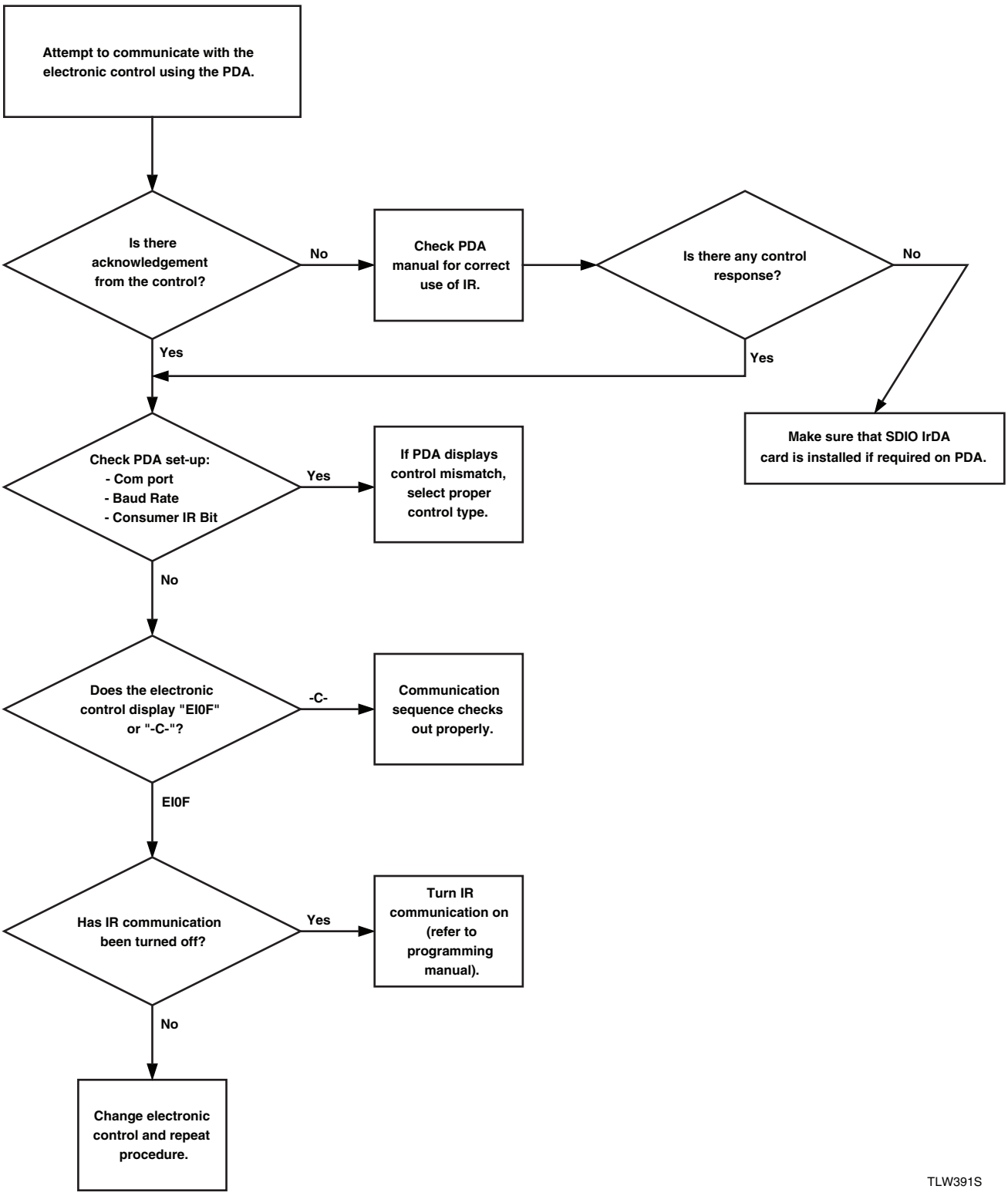
18. PDA Does Not Communicate With Control


Attempt to communicate with the electronic control using the PDA.
Is there acknowledgement from the control?
No
Check PDA manual for correct use of IR.
Is there any control response?
No
Yes
Yes
Make sure that SDIO IrDA card is installed if required on PDA.
Check PDA set-up:
- Com port
- Baud Rate
- Consumer IR Bit
Yes
If PDA displays control mismatch, select proper control type.
No
Does the electronic control display "EI0F" or "-C-"?
-C-
Communication sequence checks out properly.
EI0F
Has IR communication been turned off?
Yes
Turn IR communication on (refer to programming manual).
No
Change electronic control and repeat procedure.
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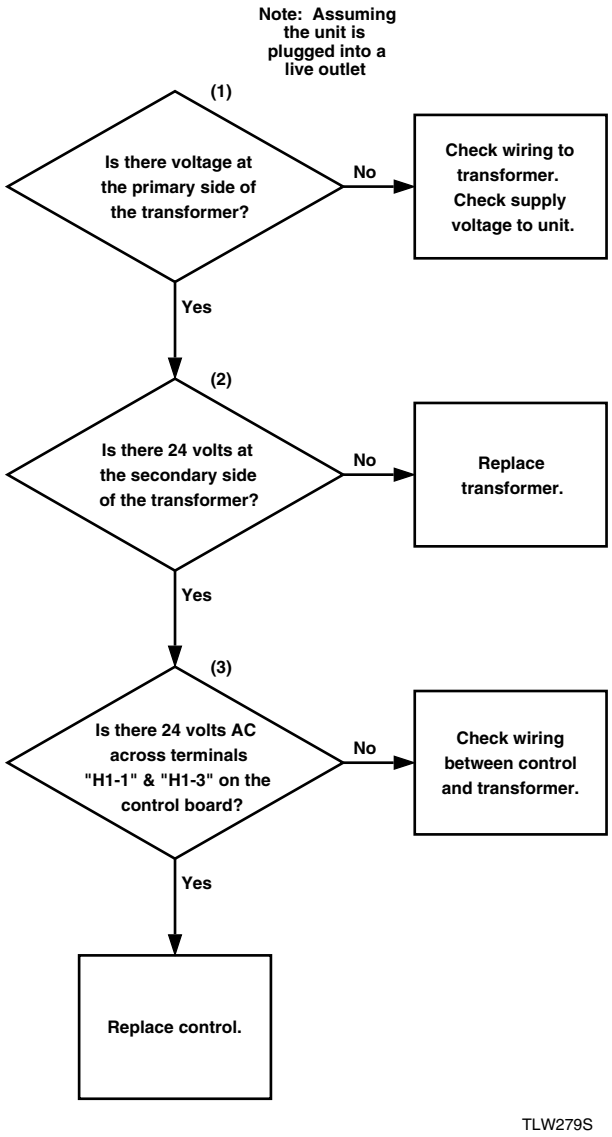
19. No Visible Display on Control


Note: Assuming the unit is plugged into a live outlet
(1)
Is there voltage at the primary side of the transformer?
No
Check wiring to transformer. Check supply voltage to unit.
Yes
(2)
Is there 24 volts at the secondary side of the transformer?
No
Replace transformer.
Yes
(3)
Is there 24 volts AC across terminals "H1-1" & "H1-3" on the control board?
No
Check wiring between control and transformer.
Yes
Replace control.

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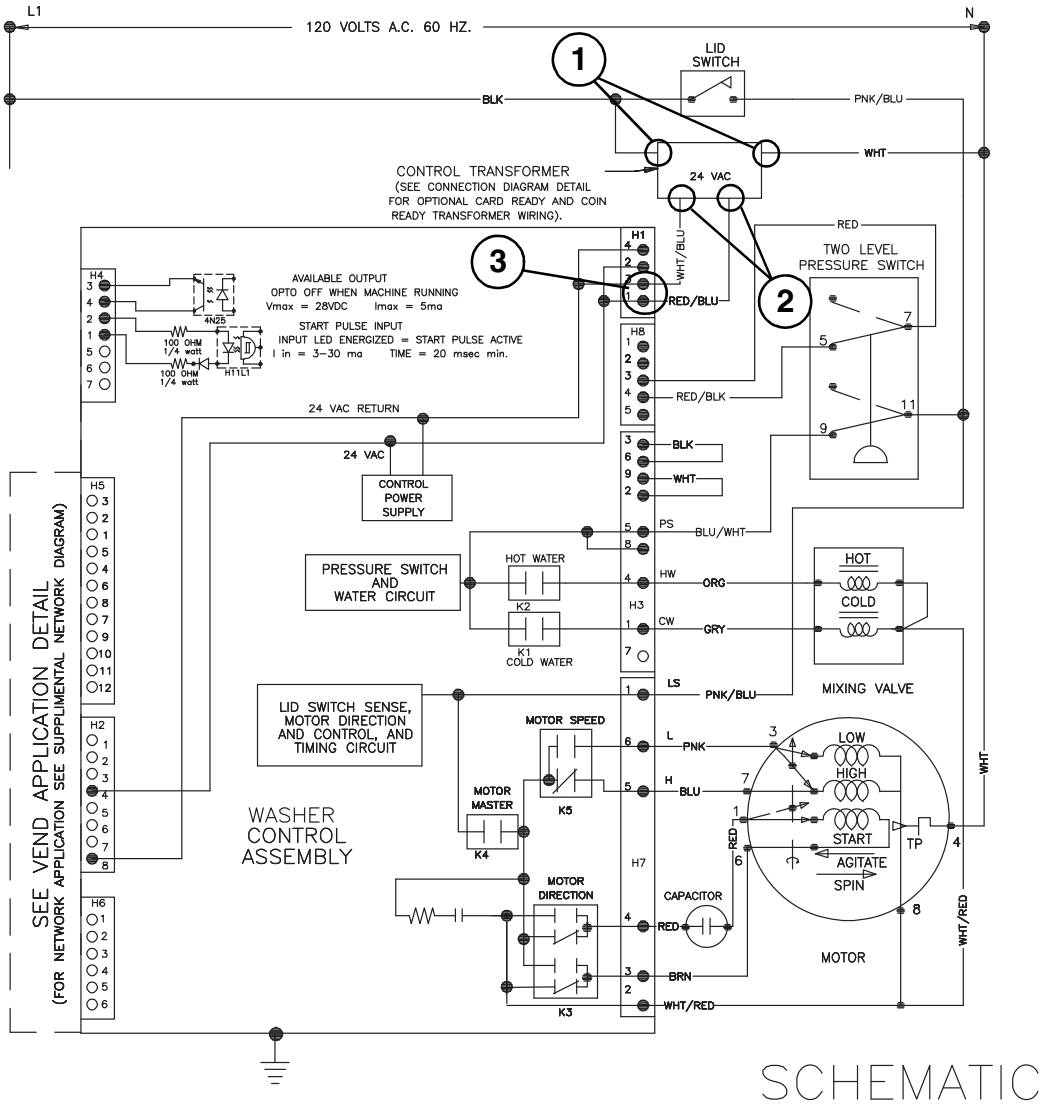
No Visible Display on Control



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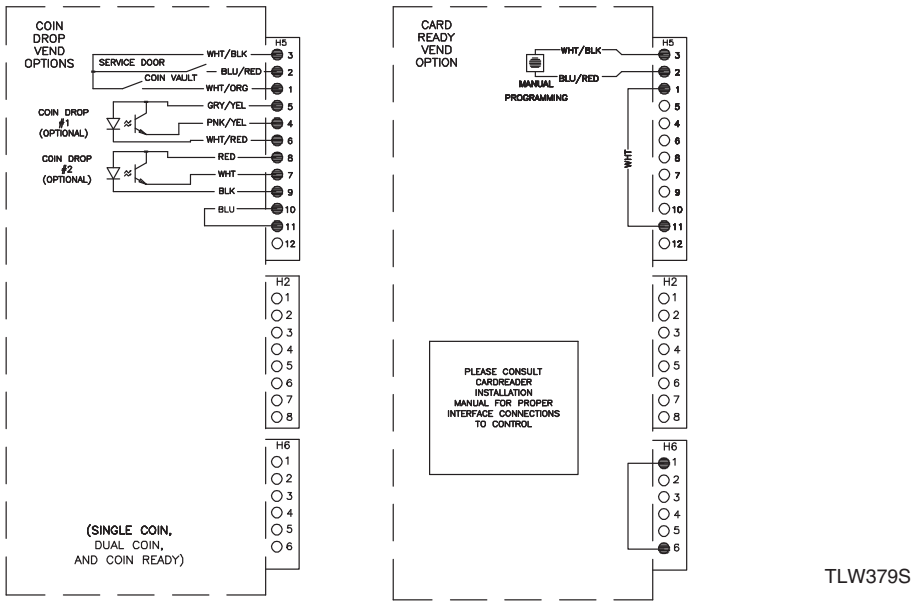
VEND APPLICATIONS DETAILS



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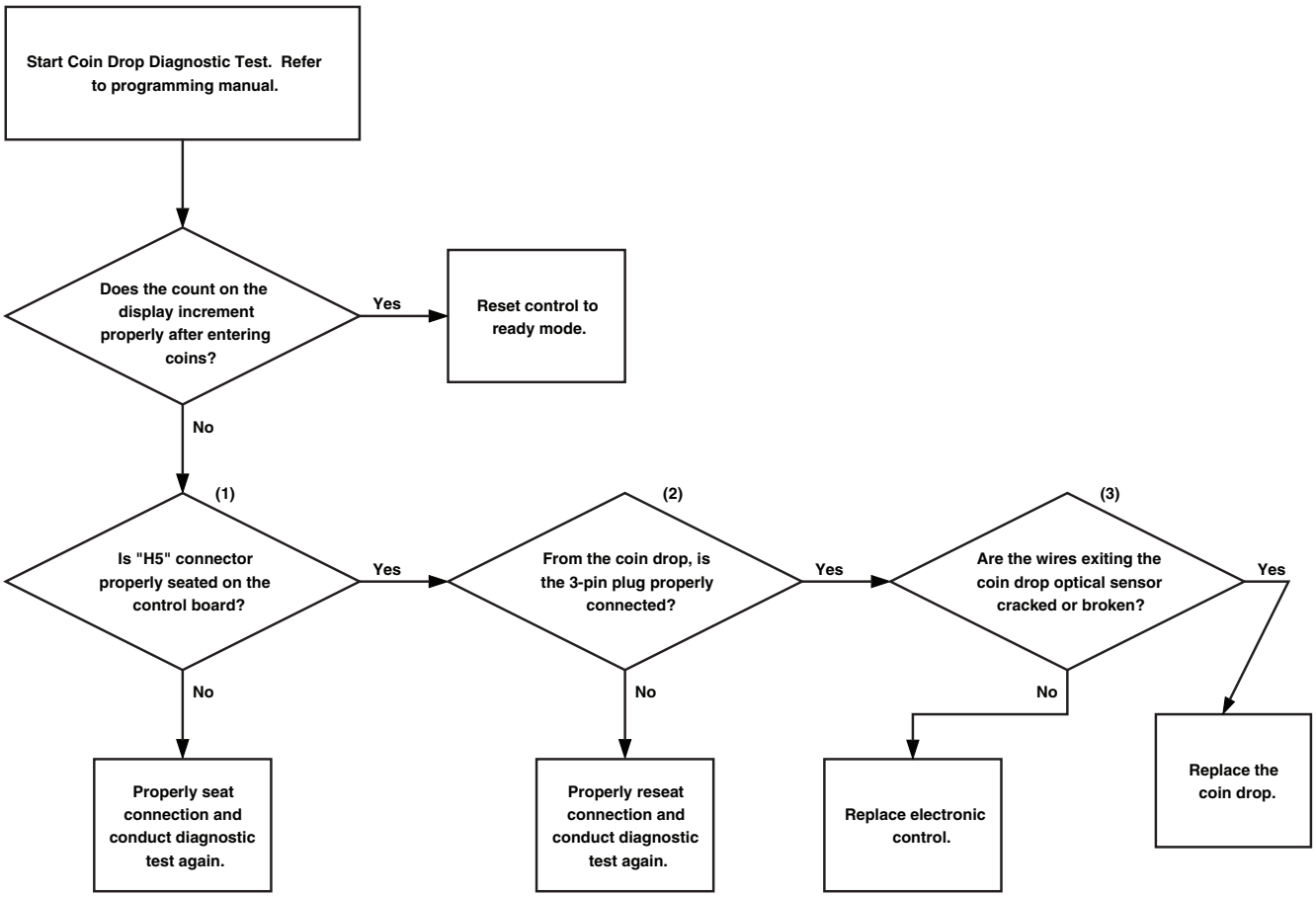
20. Coins Ignored When Entered


Start Coin Drop Diagnostic Test. Refer to programming manual.
Does the count on the display increment properly after entering coins?
Yes
Reset control to ready mode.
No
(1)
Is "H5" connector properly seated on the control board?
Yes
No
Properly seat connection and conduct diagnostic test again.
(2)
From the coin drop, is the 3-pin plug properly connected?
Yes
No
Properly reseat connection and conduct diagnostic test again.
(3)
Are the wires exiting the coin drop optical sensor cracked or broken?
Yes
No
Replace electronic control.
Replace the coin drop.
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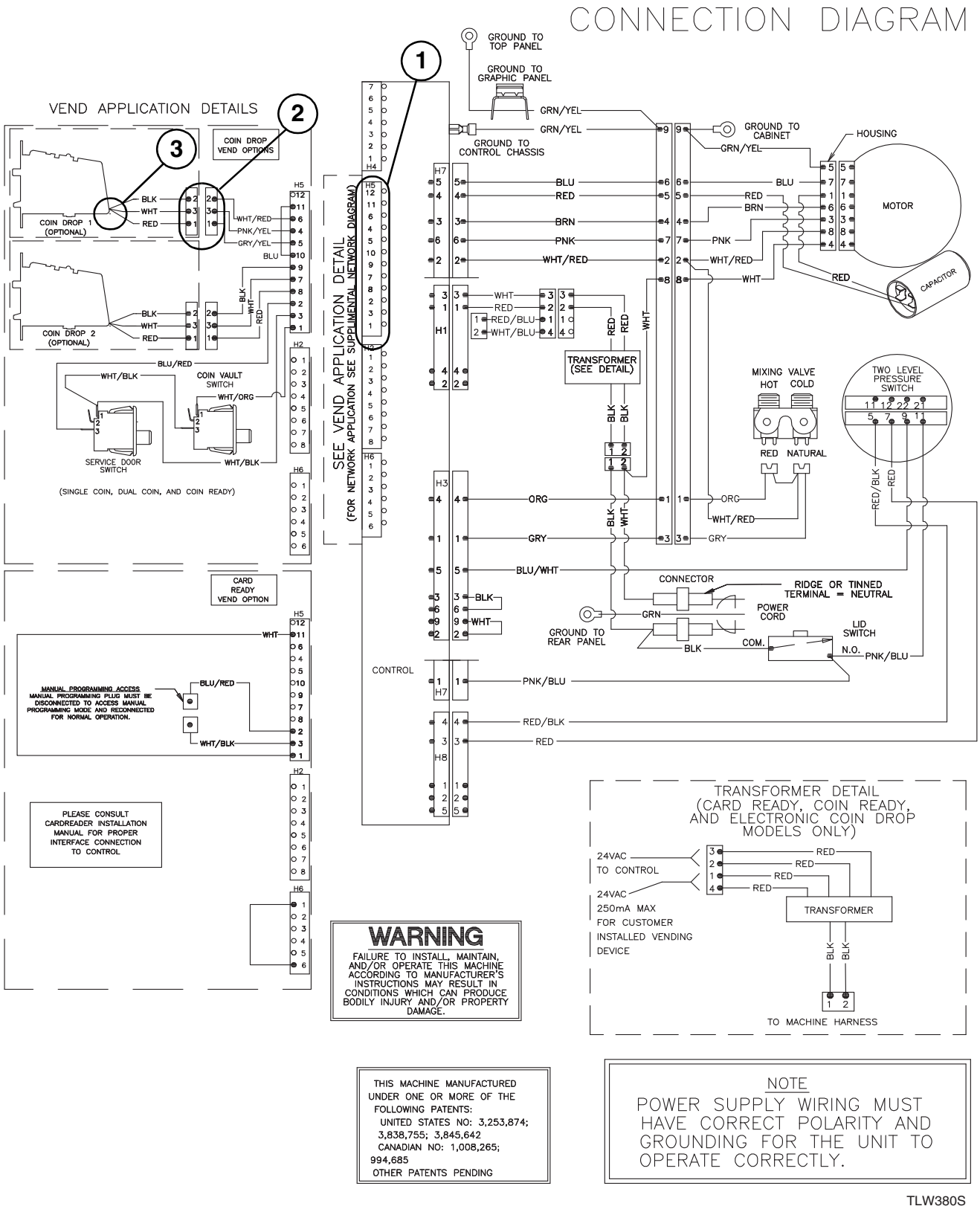
Coins Ignored When Entered


CONNECTION DIAGRAM
VEND APPLICATION DETAILS
COIN DROP VEND OPTIONS
COIN DROP 1 (OPTIONAL)
COIN DROP 2 (OPTIONAL)
COIN VAULT SWITCH
SERVICE DOOR SWITCH
(SINGLE COIN, DUAL COIN, AND COIN READY)
CARD READY VEND OPTION
MANUAL PROGRAMMING ACCESS
MANUAL PROGRAMMING PLUG MUST BE DISCONNECTED TO ACCESS MANUAL PROGRAMMING MODE AND RECONNECTED FOR NORMAL OPERATION.
PLEASE CONSULT CARDREADER INSTALLATION MANUAL FOR PROPER INTERFACE CONNECTION TO CONTROL
SEE VEND APPLICATION DETAIL (FOR NETWORK APPLICATION SEE SUPPLIMENTAL NETWORK DIAGRAM)
GROUND TO TOP PANEL
GROUND TO GRAPHIC PANEL
GROUND TO CONTROL CHASSIS
GROUND TO CABINET
GROUND TO REAR PANEL
HOUSING
MOTOR
CAPACITOR
TRANSFORMER (SEE DETAIL)
MIXING VALVE HOT COLD
RED NATURAL
TWO LEVEL PRESSURE SWITCH
CONNECTOR
RIDGE OR TINNED TERMINAL = NEUTRAL
POWER CORD
LID SWITCH
CONTROL
TRANSFORMER DETAIL (CARD READY, COIN READY, AND ELECTRONIC COIN DROP MODELS ONLY)
24VAC TO CONTROL
24VAC 250mA MAX FOR CUSTOMER INSTALLED VENDING DEVICE
TRANSFORMER
TO MACHINE HARNESS
WARNING
FAILURE TO INSTALL, MAINTAIN, AND/OR OPERATE THIS MACHINE ACCORDING TO MANUFACTURER'S INSTRUCTIONS MAY RESULT IN CONDITIONS WHICH CAN PRODUCE BODILY INJURY AND/OR PROPERTY DAMAGE.
THIS MACHINE MANUFACTURED UNDER ONE OR MORE OF THE FOLLOWING PATENTS:
UNITED STATES NO: 3,253,874; 3,838,755; 3,845,642
CANADIAN NO: 1,008,265; 994,685
OTHER PATENTS PENDING
NOTE
POWER SUPPLY WIRING MUST HAVE CORRECT POLARITY AND GROUNDING FOR THE UNIT TO OPERATE CORRECTLY.

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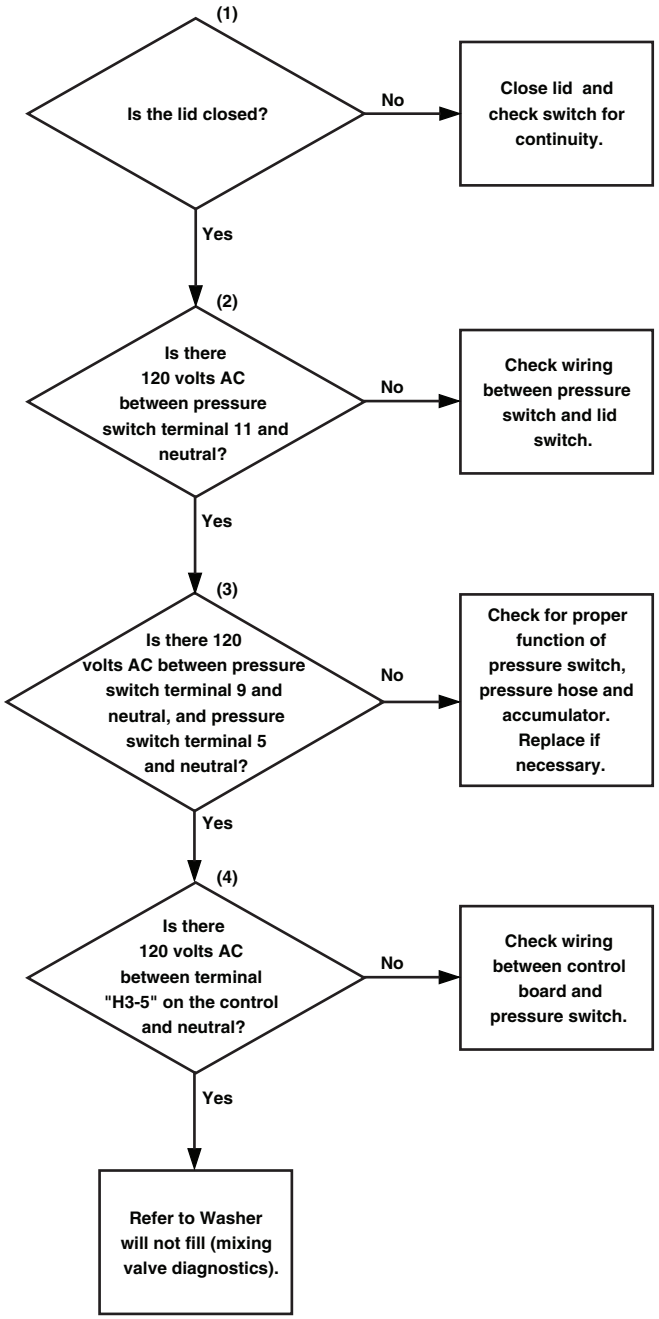
21. Washer Will Not Fill (Pressure Switch Diagnostic)


(1)
Is the lid closed?
No
Close lid and check switch for continuity.
Yes
(2)
Is there 120 volts AC between pressure switch terminal 11 and neutral?
No
Check wiring between pressure switch and lid switch.
Yes
(3)
Is there 120 volts AC between pressure switch terminal 9 and neutral, and pressure switch terminal 5 and neutral?
No
Check for proper function of pressure switch, pressure hose and accumulator. Replace if necessary.
Yes
(4)
Is there 120 volts AC between terminal "H3-5" on the control and neutral?
No
Check wiring between control board and pressure switch.
Yes
Refer to Washer will not fill (mixing valve diagnostics).

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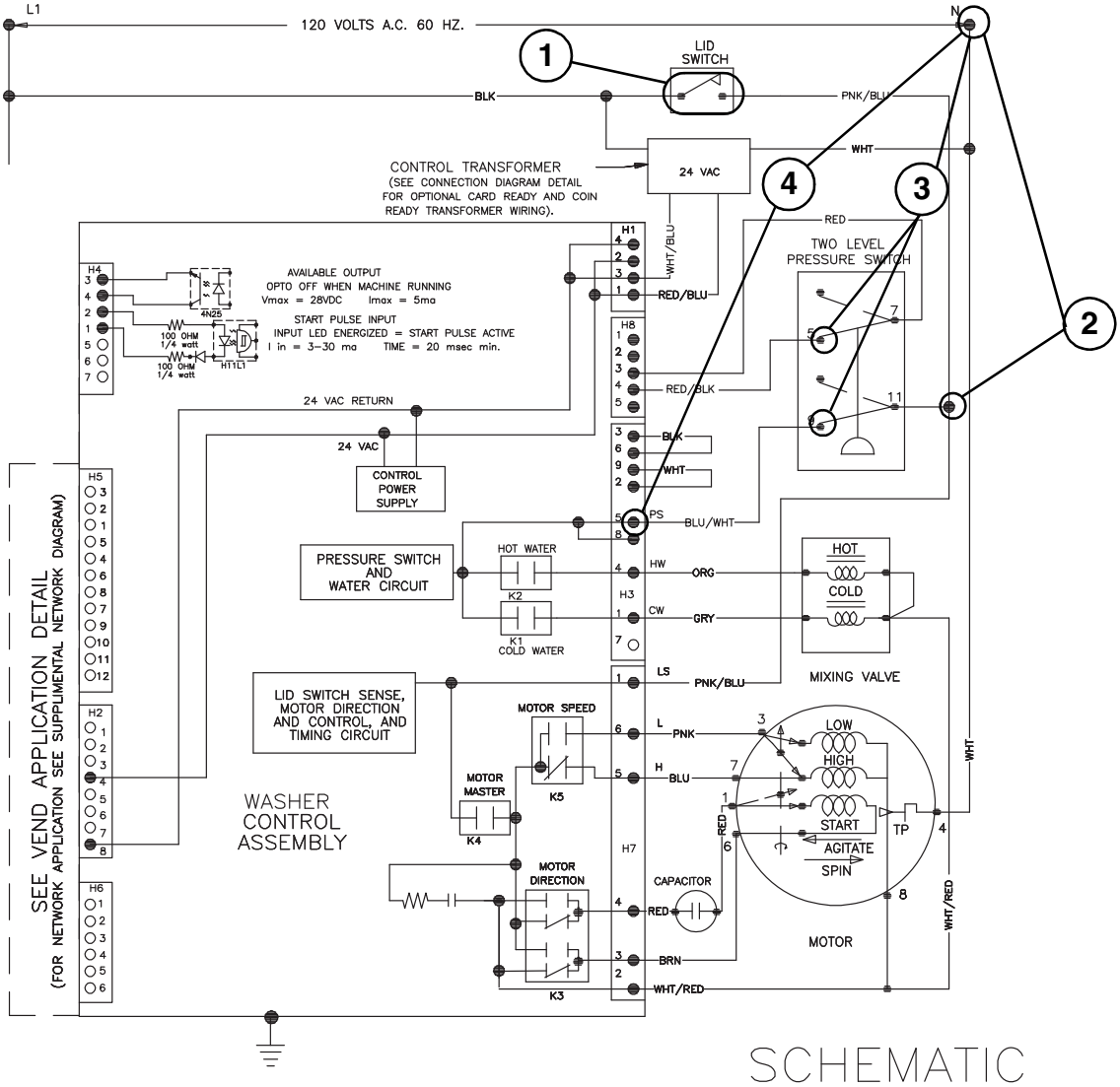
Washer Will Not Fill (Pressure Switch Diagnostic)



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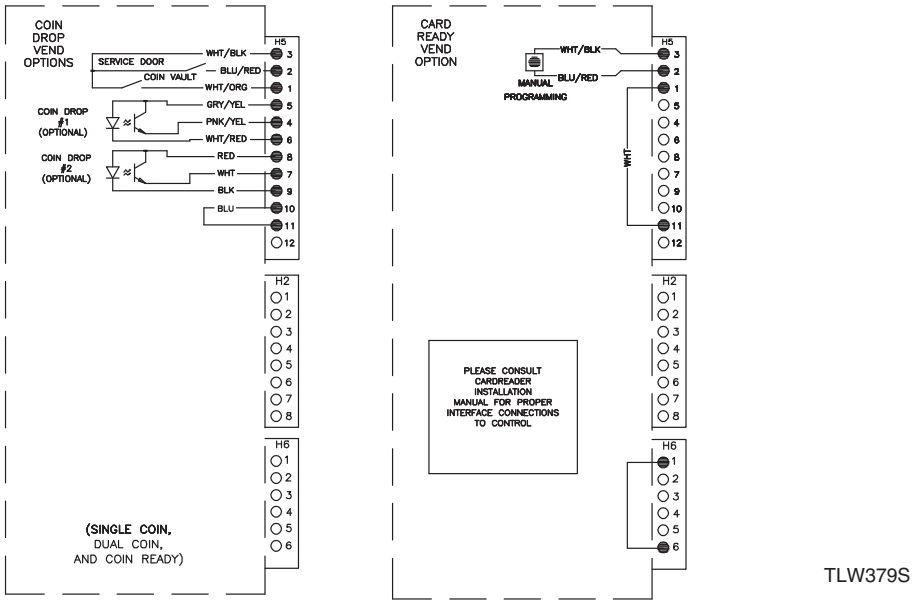
VEND APPLICATIONS DETAILS



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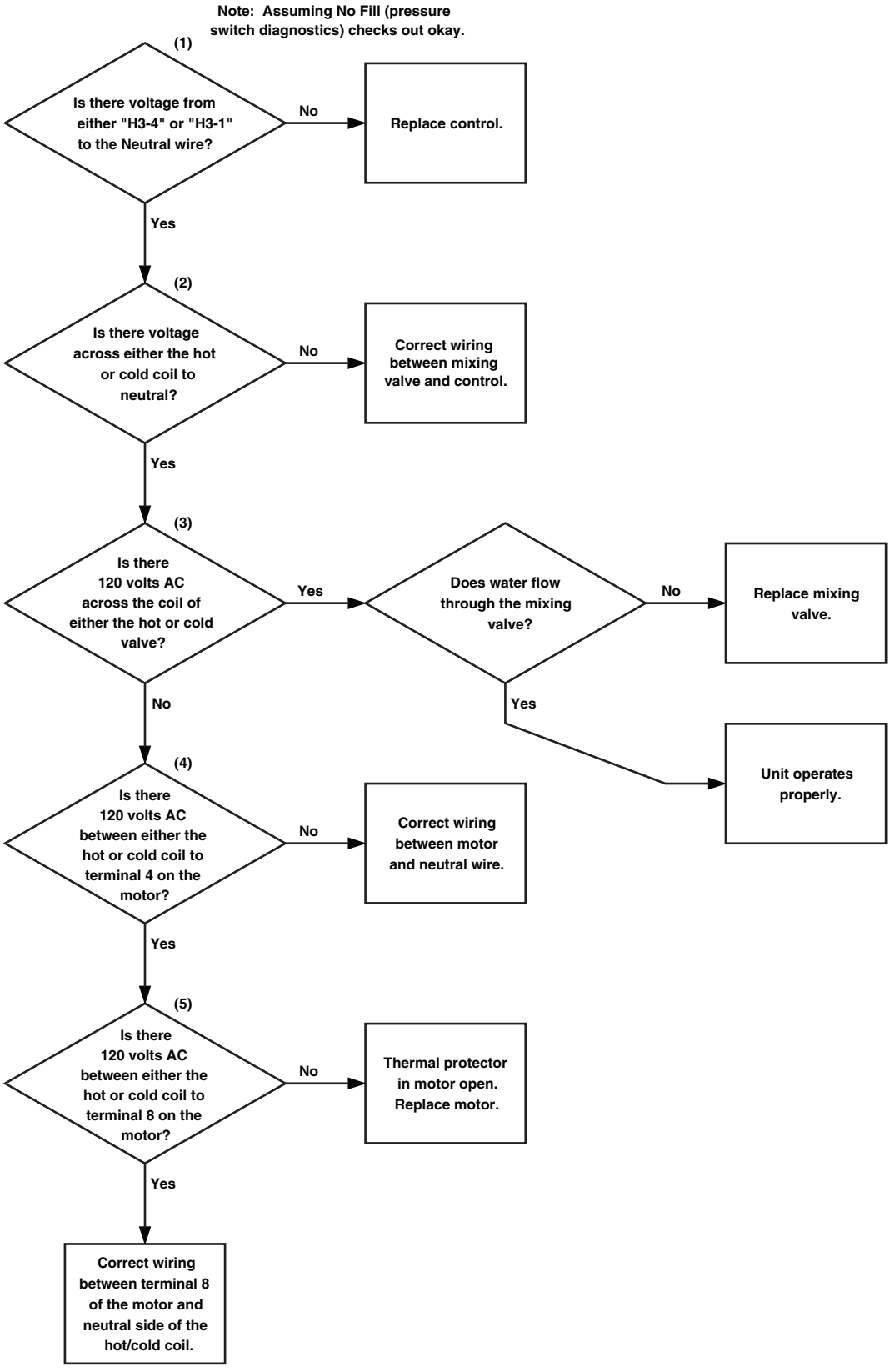
22. Washer Will Not Fill (Mixing Valve Diagnostic)


Note: Assuming No Fill (pressure switch diagnostics) checks out okay.
(1)
Is there voltage from either "H3-4" or "H3-1" to the Neutral wire?
No
Replace control.
Yes
(2)
Is there voltage across either the hot or cold coil to neutral?
No
Correct wiring between mixing valve and control.
Yes
(3)
Is there 120 volts AC across the coil of either the hot or cold valve?
Yes
Does water flow through the mixing valve?
No
Replace mixing valve.
Yes
Unit operates properly.
No
(4)
Is there 120 volts AC between either the hot or cold coil to terminal 4 on the motor?
No
Correct wiring between motor and neutral wire.
Yes
(5)
Is there 120 volts AC between either the hot or cold coil to terminal 8 on the motor?
No
Thermal protector in motor open. Replace motor.
Yes
Correct wiring between terminal 8 of the motor and neutral side of the hot/cold coil.

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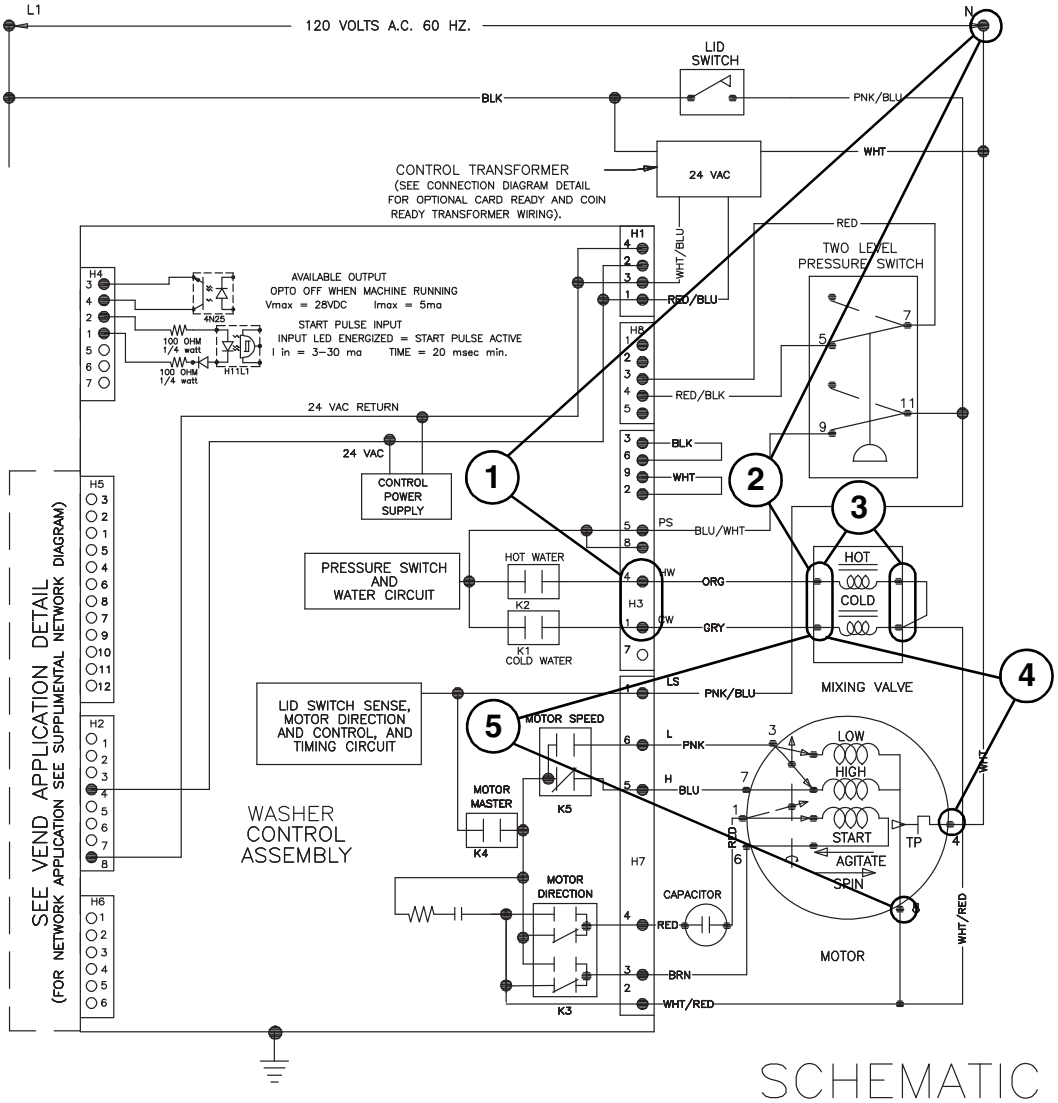
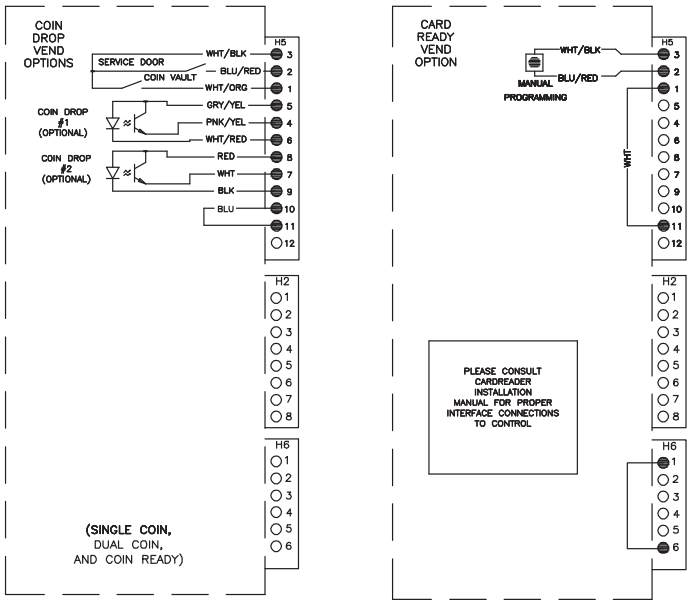
Washer Will Not Fill (Mixing Valve Diagnostic)



SCHEMATIC

VEND APPLICATIONS DETAILS



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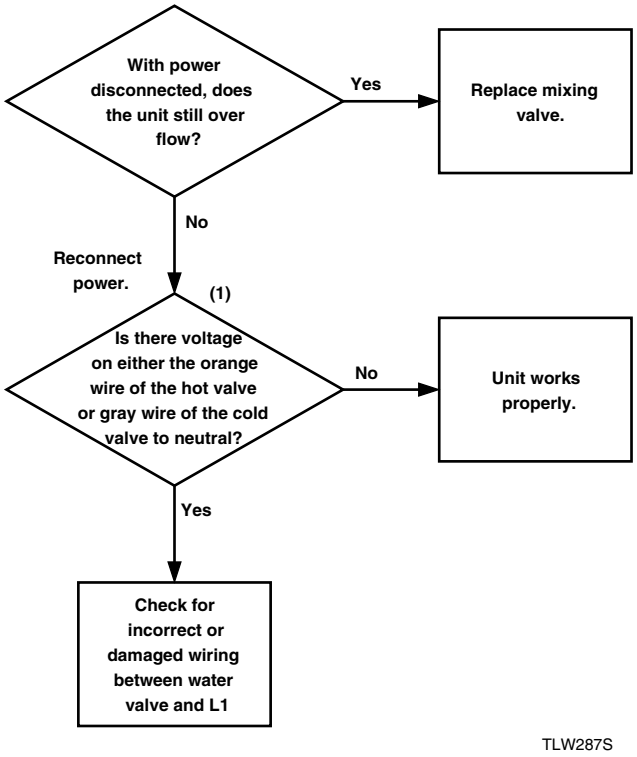
23. Washer Over Fills


With power disconnected, does the unit still over flow?
Yes
Replace mixing valve.
No
Reconnect power.
(1)
Is there voltage on either the orange wire of the hot valve or gray wire of the cold valve to neutral?
No
Unit works properly.
Yes
Check for incorrect or damaged wiring between water valve and L1
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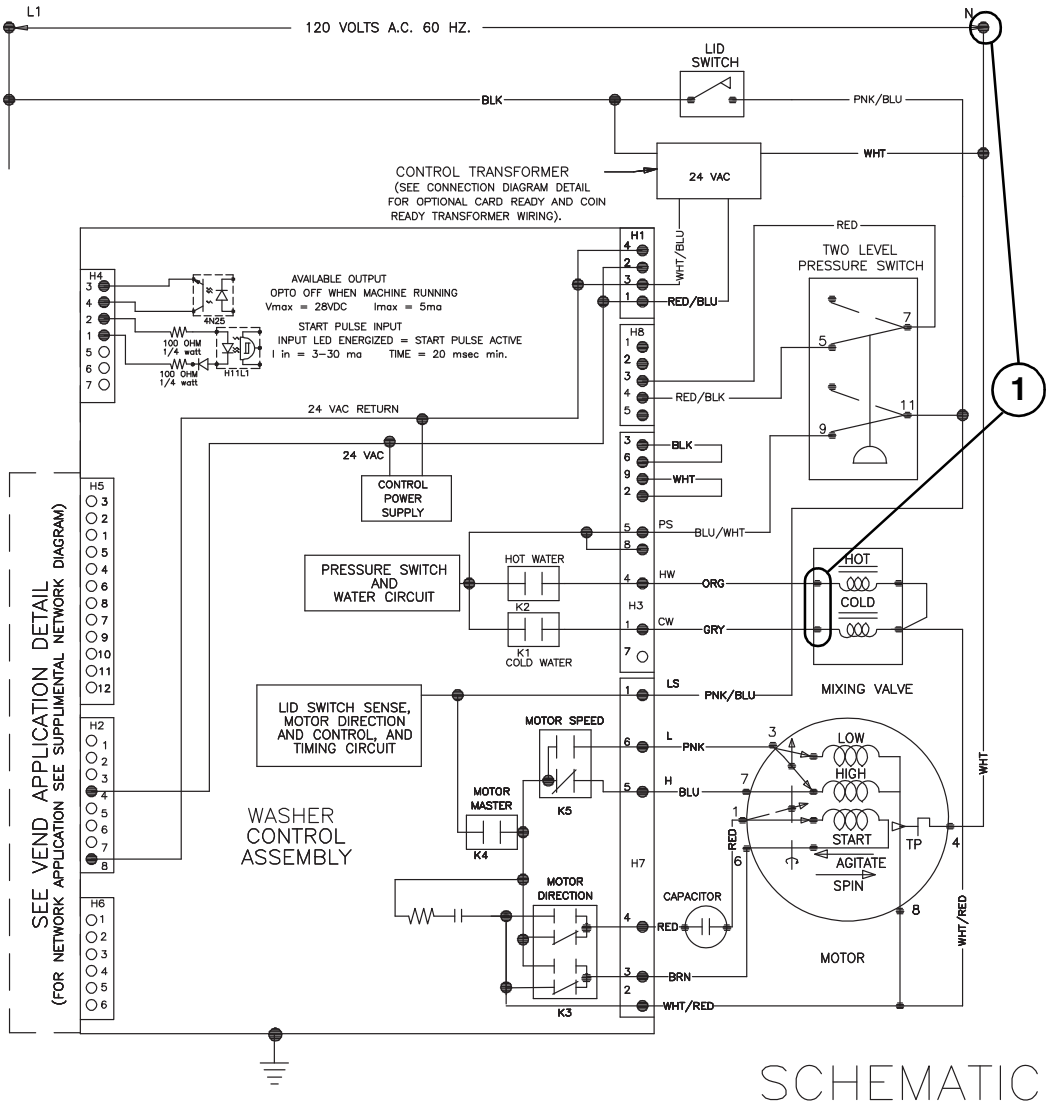
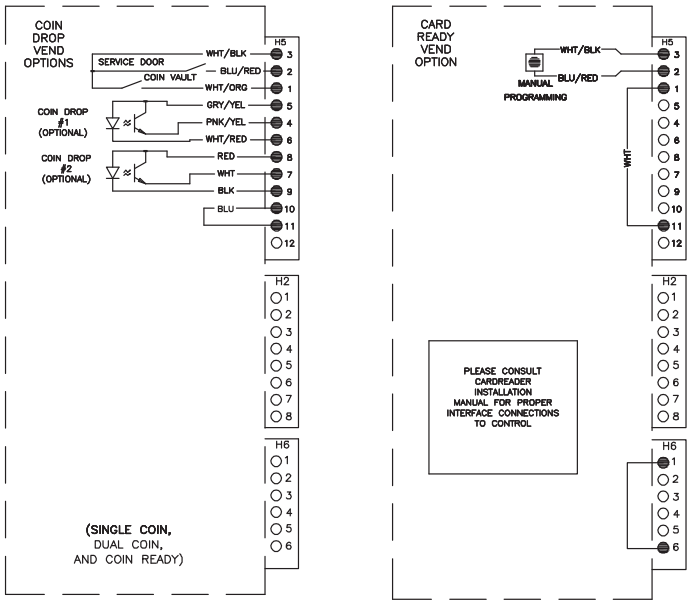
Washer Over Fills



SCHEMATIC

VEND APPLICATIONS DETAILS



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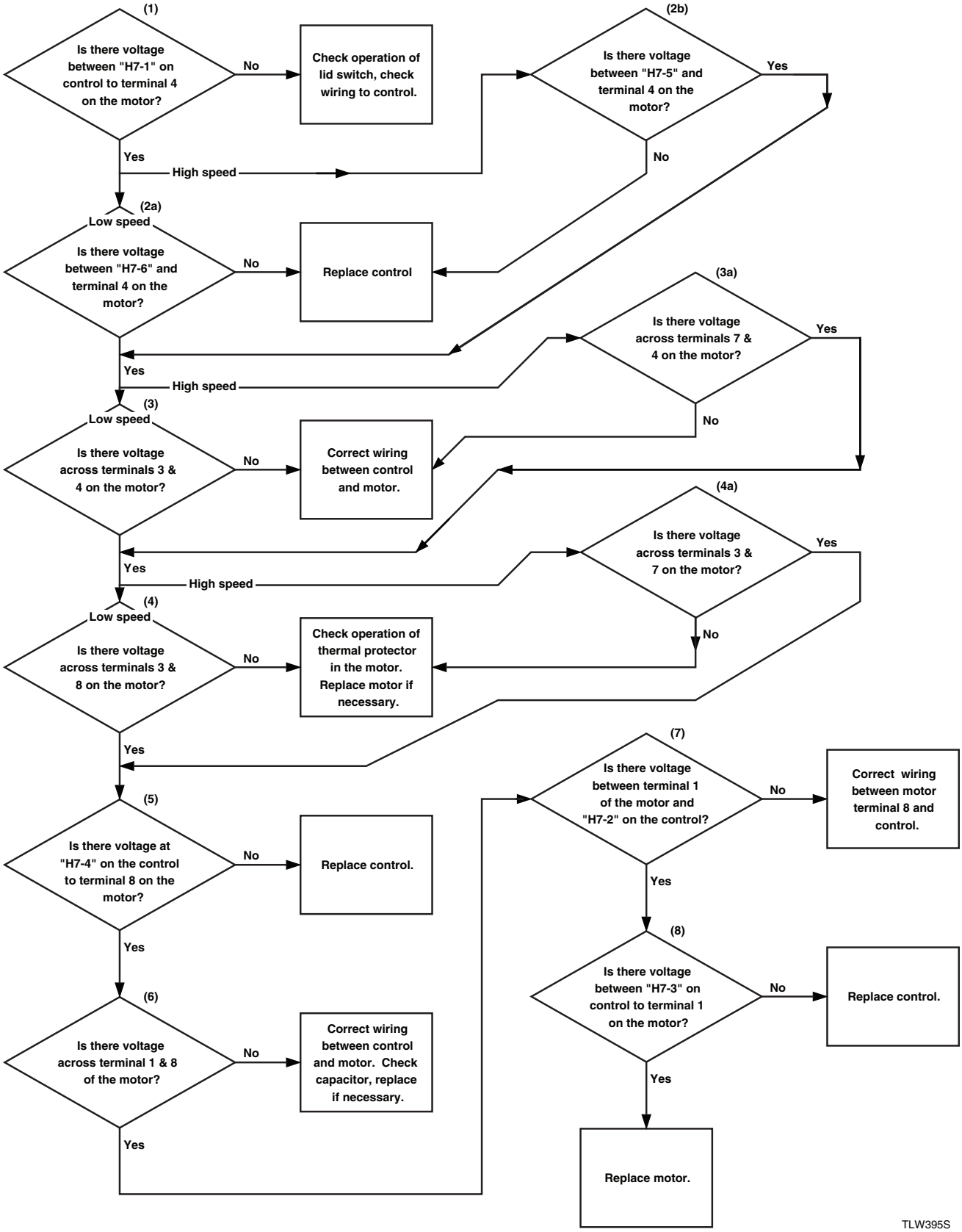
24. No Agitation – Low and High Speed



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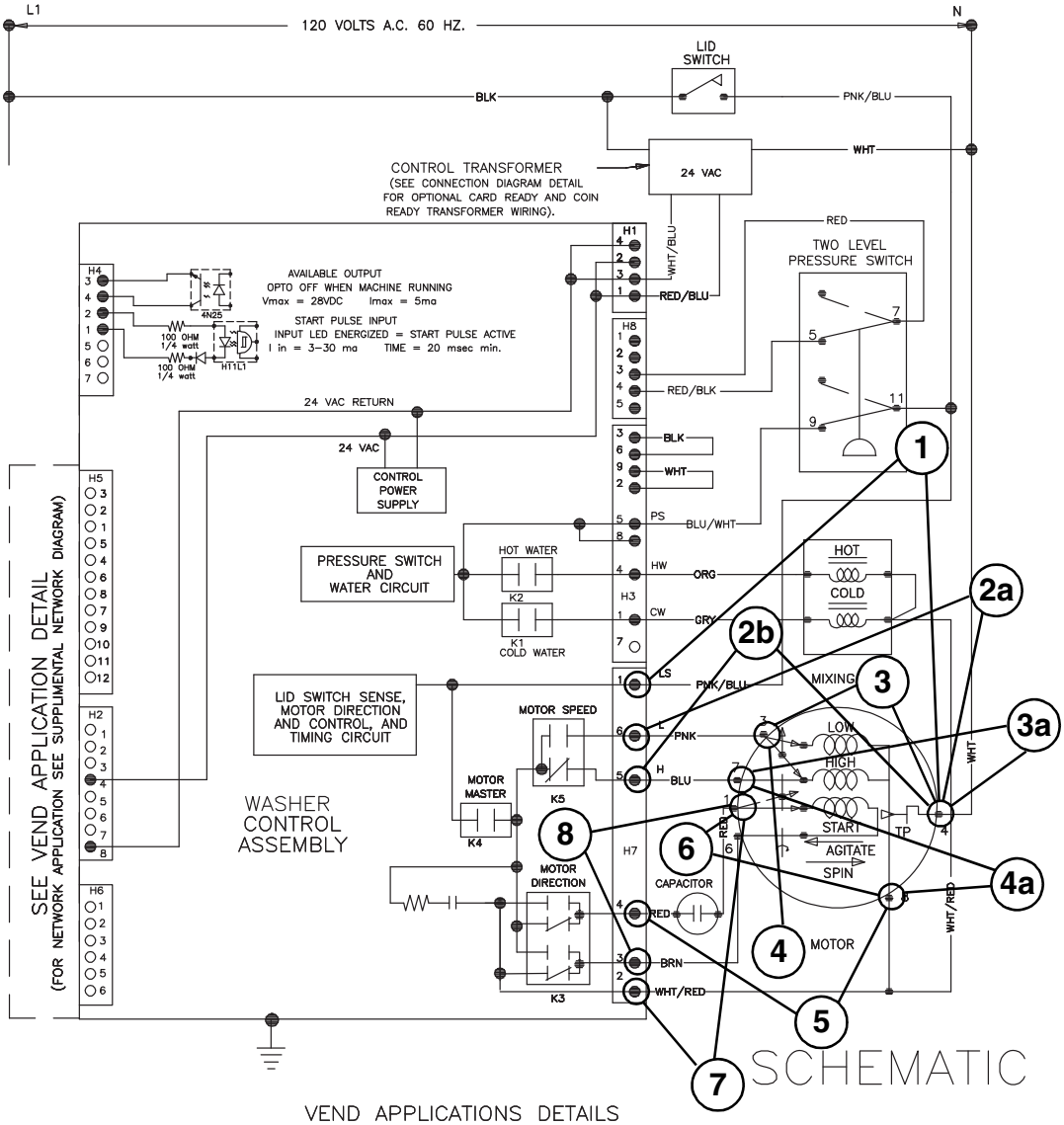
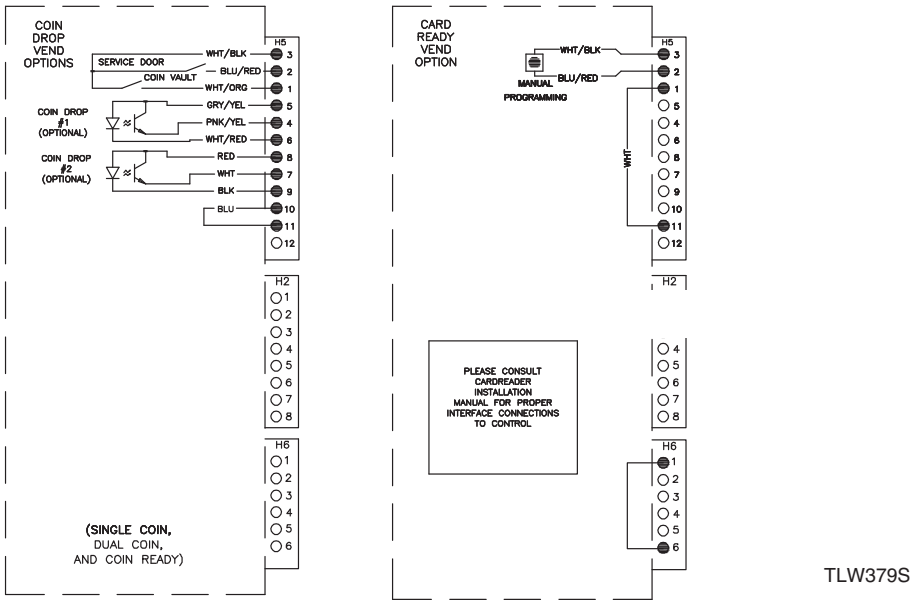
No Agitation – Low and High Speed



VEND APPLICATIONS DETAILS



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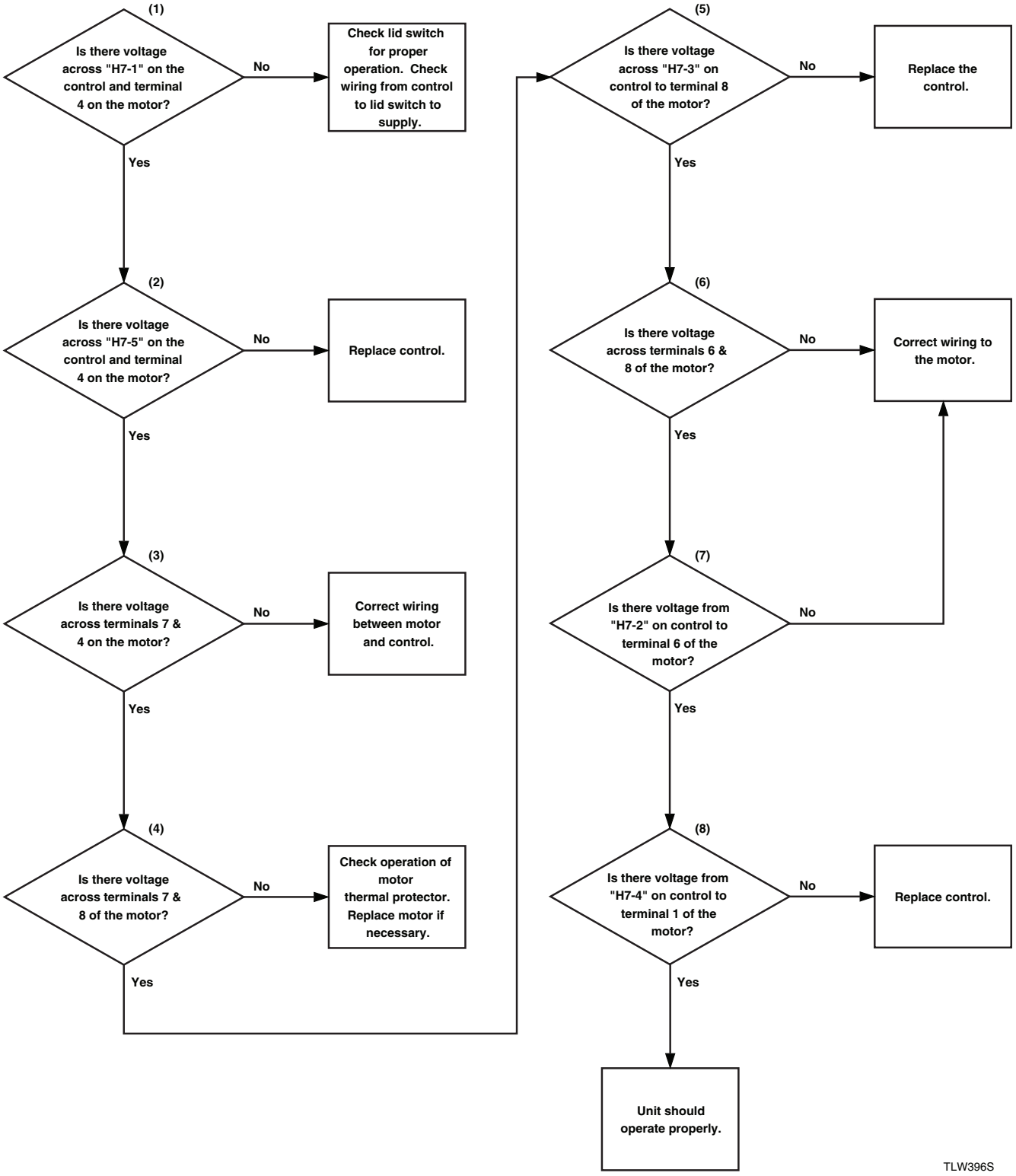
25. Washer Will Not Spin – High Speed


(1)
Is there voltage across "H7-1" on the control and terminal 4 on the motor?
No
Check lid switch for proper operation. Check wiring from control to lid switch to supply.
Yes
(2)
Is there voltage across "H7-5" on the control and terminal 4 on the motor?
No
Replace control.
Yes
(3)
Is there voltage across terminals 7 & 4 on the motor?
No
Correct wiring between motor and control.
Yes
(4)
Is there voltage across terminals 7 & 8 of the motor?
No
Check operation of motor thermal protector. Replace motor if necessary.
Yes
(5)
Is there voltage across "H7-3" on control to terminal 8 of the motor?
No
Replace the control.
Yes
(6)
Is there voltage across terminals 6 & 8 of the motor?
No
Correct wiring to the motor.
Yes
(7)
Is there voltage from "H7-2" on control to terminal 6 of the motor?
No
Yes
(8)
Is there voltage from "H7-4" on control to terminal 1 of the motor?
No
Replace control.
Yes
Unit should operate properly.
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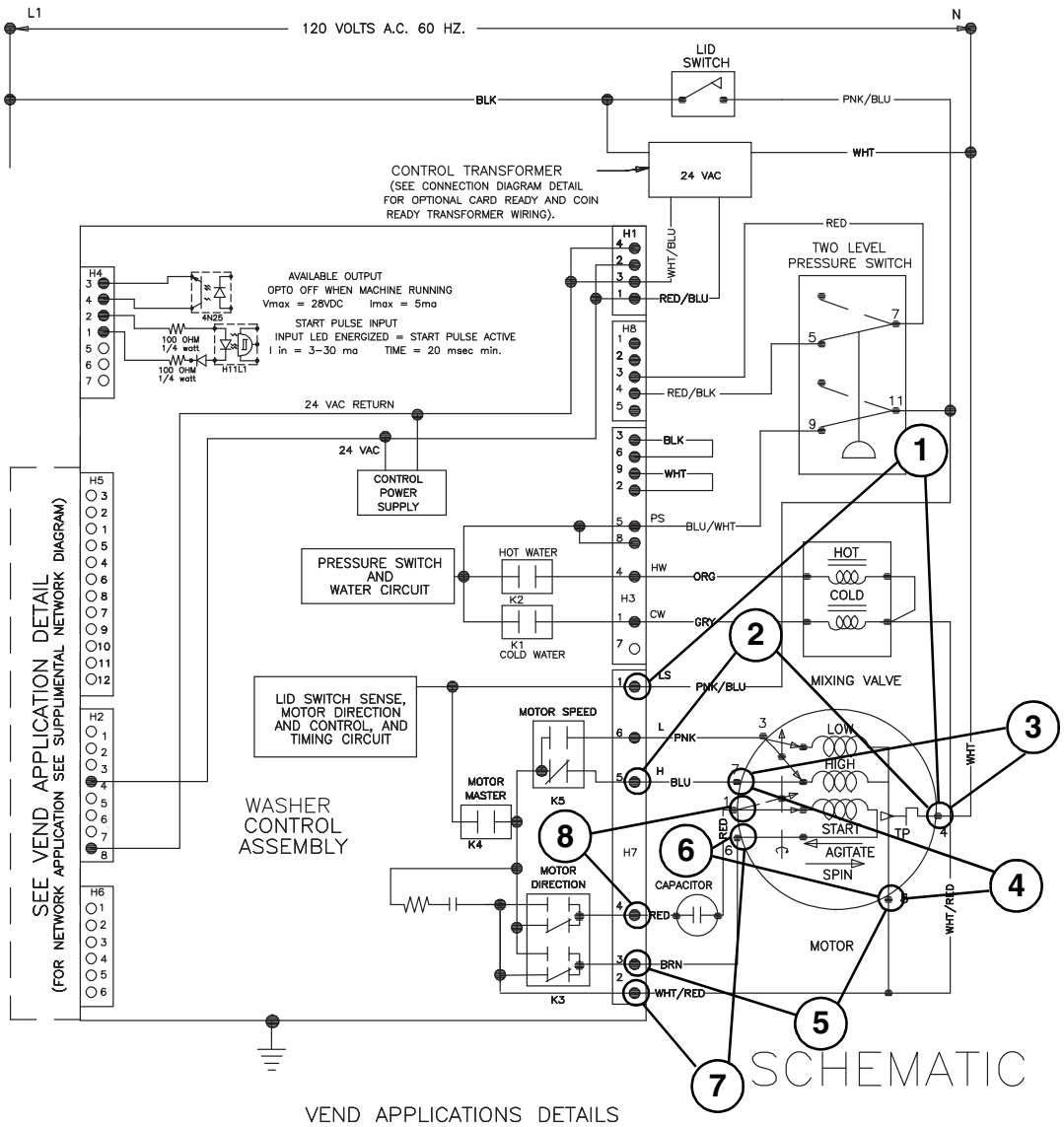
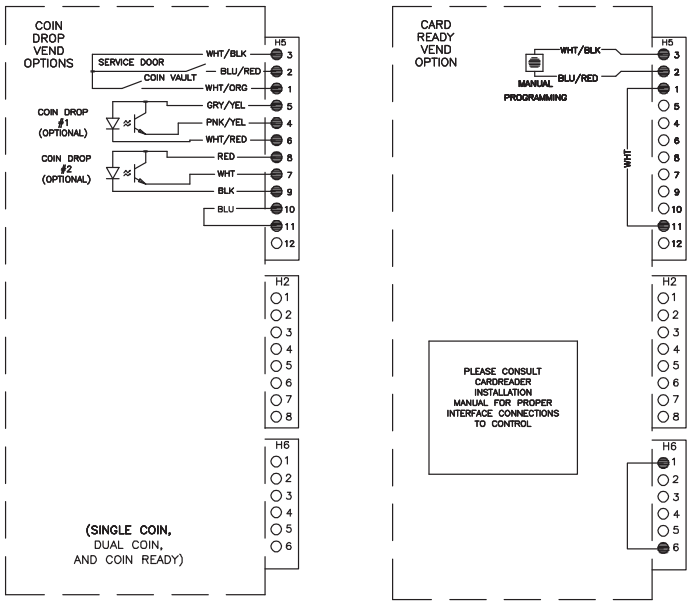
Washer Will Not Spin – High Speed



VEND APPLICATIONS DETAILS



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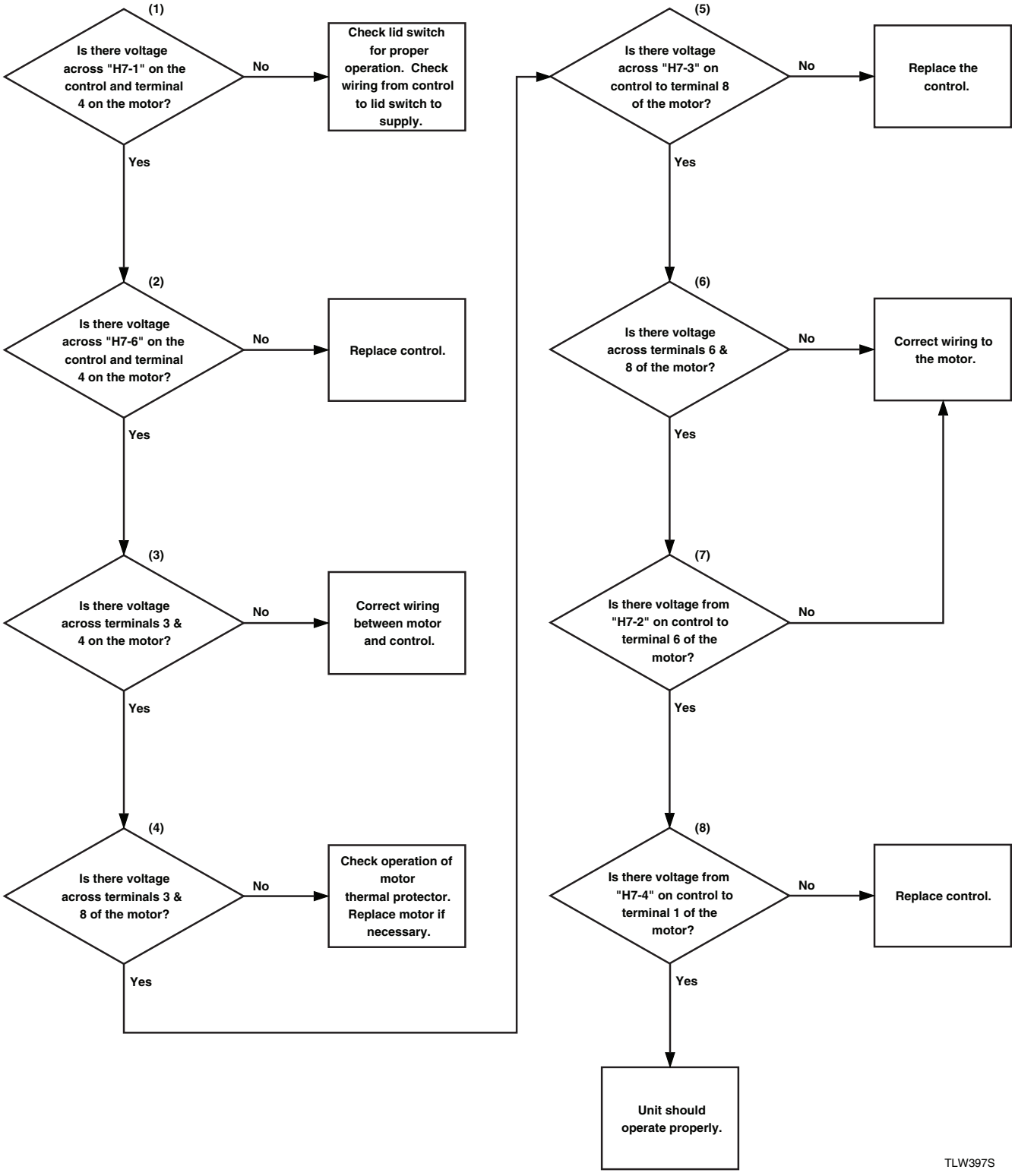
26. Washer Will Not Spin – Low Speed


(1)
Is there voltage across "H7-1" on the control and terminal 4 on the motor?
No
Check lid switch for proper operation. Check wiring from control to lid switch to supply.
Yes
(2)
Is there voltage across "H7-6" on the control and terminal 4 on the motor?
No
Replace control.
Yes
(3)
Is there voltage across terminals 3 & 4 on the motor?
No
Correct wiring between motor and control.
Yes
(4)
Is there voltage across terminals 3 & 8 of the motor?
No
Check operation of motor thermal protector. Replace motor if necessary.
Yes
(5)
Is there voltage across "H7-3" on control to terminal 8 of the motor?
No
Replace the control.
Yes
(6)
Is there voltage across terminals 6 & 8 of the motor?
No
Correct wiring to the motor.
Yes
(7)
Is there voltage from "H7-2" on control to terminal 6 of the motor?
No
Yes
(8)
Is there voltage from "H7-4" on control to terminal 1 of the motor?
No
Replace control.
Yes
Unit should operate properly.
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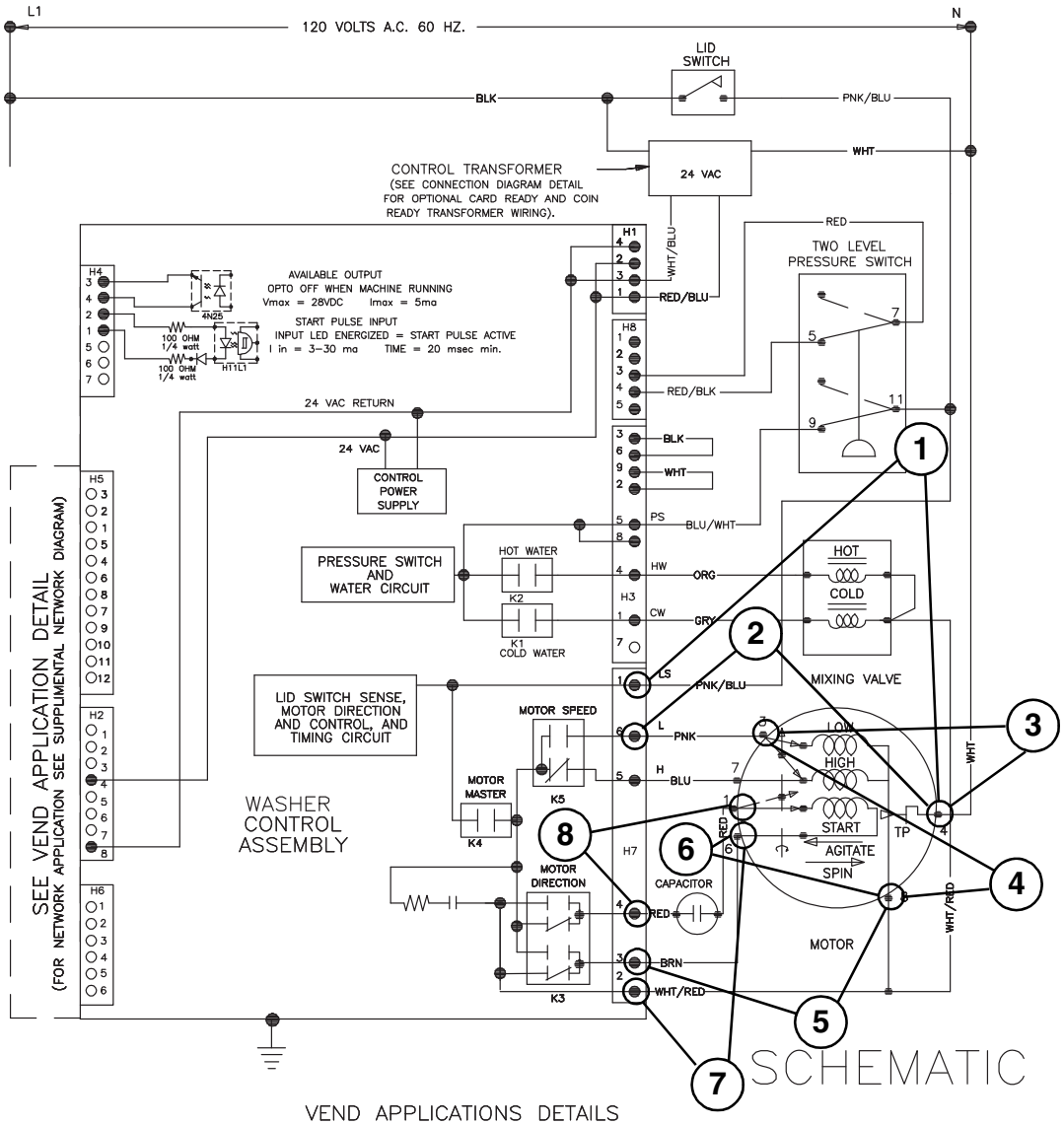
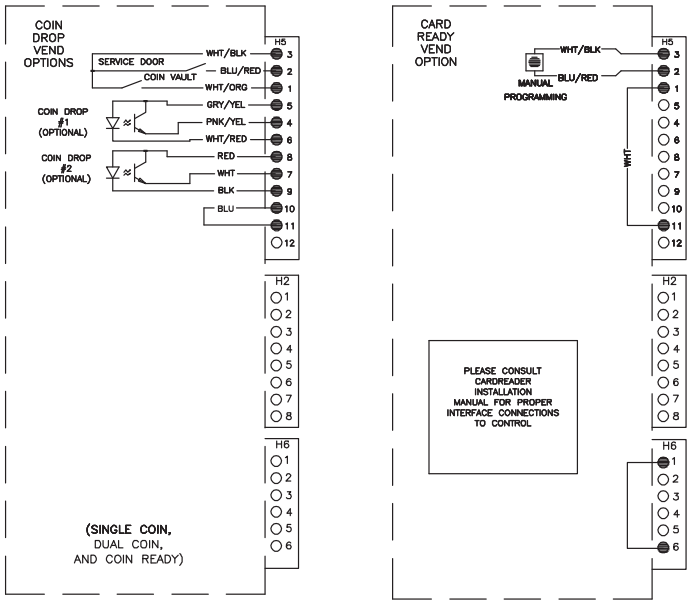
Washer Will Not Spin – Low Speed



VEND APPLICATIONS DETAILS



TLW379S

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Section 4
Adjustments

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the washer before servicing.**
- **Never start the washer with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer is properly grounded.**

W003

27. Leveling Legs

Refer to *Figure 10*.

a. Place rubber feet on all four leveling legs.
b. Place washer in position on a clean, dry, and reasonably firm floor.
c. Loosen locknuts and adjust two front leveling legs. Once adjusted, tilt washer forward on front legs and lower back down into position to set the rear self-leveling legs.
d. Washer must not rock. After washer is at desired height, tighten locknuts securely against bottom of washer base. If these locknuts are not tight, washer will not remain stationary during operation.

NOTE: Install rear extension leg kit, No. 566P3, (optional equipment at extra cost) to raise height of washer.

NOTE: Improper installation, installation on carpet or flexing of a weak floor will cause excessive vibration.

IMPORTANT: Do not slide washer across floor once leveling legs have been extended, as legs and base could become damaged.

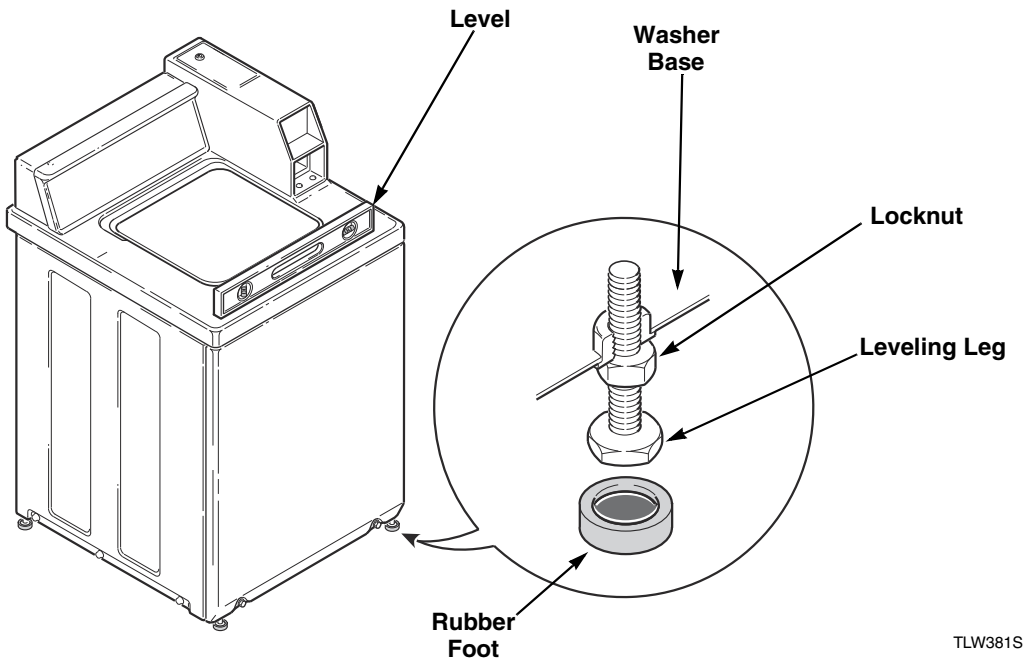

Figure 10

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WARNING

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W003

28. Belt (Agitate and Spin)

No belt adjustment is required.

29. Cleaning Non-Electronic Coin Drop

a. Disconnect electrical power to machine and drop.
b. Remove coin drop from machine.
c. If lint is preventing coins from rolling through coin drop, blow compressed air though coin entry and along the side of the coin drop. Refer to *Figure 11*.

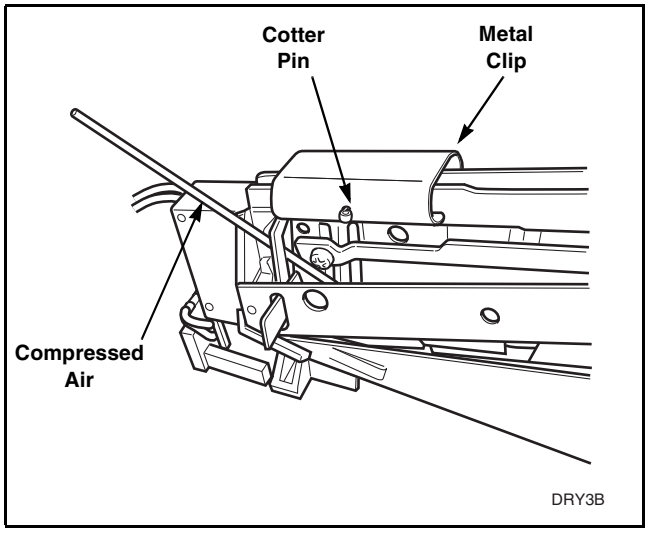

Figure 11

d. Insert a coin through the coin drop. If coin does not roll through drop, continue with the following.
e. Remove cotter pin from top of drop. Refer to *Figure 11*. Save pin for reinstallation when cleaning is complete.
f. Move metal clip closer to sensor so that it comes off frame. Refer to *Figure 11*.
g. Remove coin return from coin drop frame. Refer to *Figure 12*.

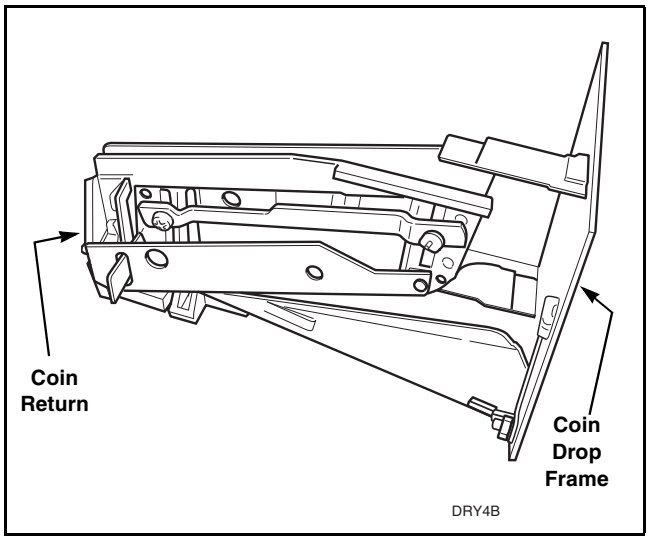

Figure 12

h. Check coin path in coin drop for lint and residue. If lint or light residues are present, use a cotton swab to remove. If heavy residue is present, it may be necessary to first scrape off excessive residue and then use a cotton swab dipped in water or isopropyl alcohol (rubbing alcohol) to remove remainder of residue. Refer to *Figure 13*.

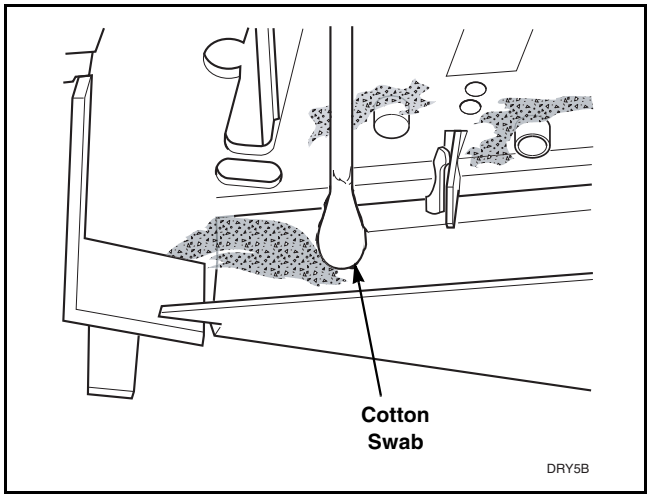

Figure 13

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WARNING

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W003

i. Check coin return pendulum to verify it swings freely. If pendulum does not swing freely, spray pendulum pivot point with Teflon based lubricant and move pendulum back and forth two to three times. An additional application of Teflon based lubricant may be necessary to ensure that pendulum swings freely. Refer to *Figure 14*.

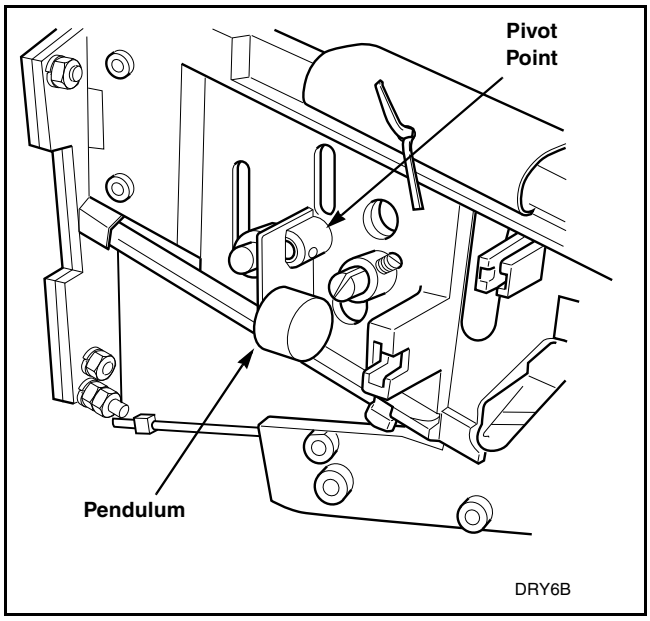

Figure 14

j. Check coin drop sensor for dust or dirt on eyes. Wipe eyes with dry cotton swab. Refer to *Figure 15*.

IMPORTANT: DO NOT use isopropyl alcohol to clean electronic sensor or eyes.

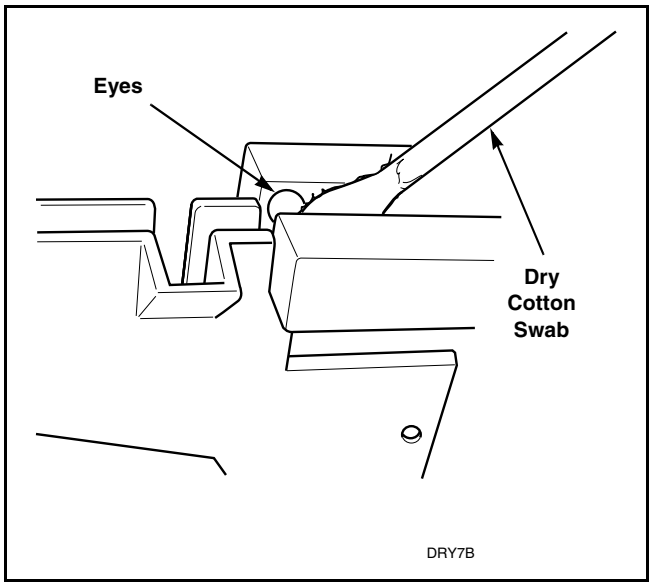

Figure 15

k. Reinstall coin return on to coin drop frame.
l. Reinstall metal clip and slide towards coin insert slot. All cotter pin holes must line up.
m. Reinstall cotter pin.
n. Place drop on level surface to verify that coins follow correct path in drop. It may be necessary to lift drop to allow coin to follow through sensor.
o. Reinstall coin drop into machine.
p. Reconnect electrical power to machine and drop.
q. Add a coin to drop to verify that coin drop is operating properly and that electrical connection is working properly.

NOTE: If coin drop does not operate properly after above steps have been completed, corrosion of metal or vandalized components within coin drop may be preventing the coin drop from functioning correctly. Replace coin drop.

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WARNING

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W003

30. Cleaning Electronic Coin Drop

NOTE: The electronic coin drop should be cleaned once a year. Clean the drop more often if it is exposed to high levels of residue or lint build-up.

a. Disconnect electrical power to machine and drop.
b. Remove coin drop from machine.
c. Move spring downward until cover catch is free. Refer to *Figure 16*.

NOTE: Do not lift or overbend the spring in any direction.

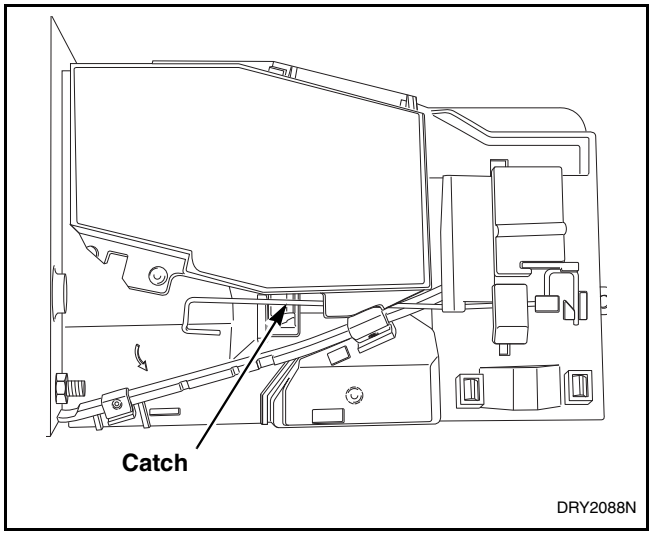

Figure 16

d. Open cover for coin drop. Refer to *Figure 17*.

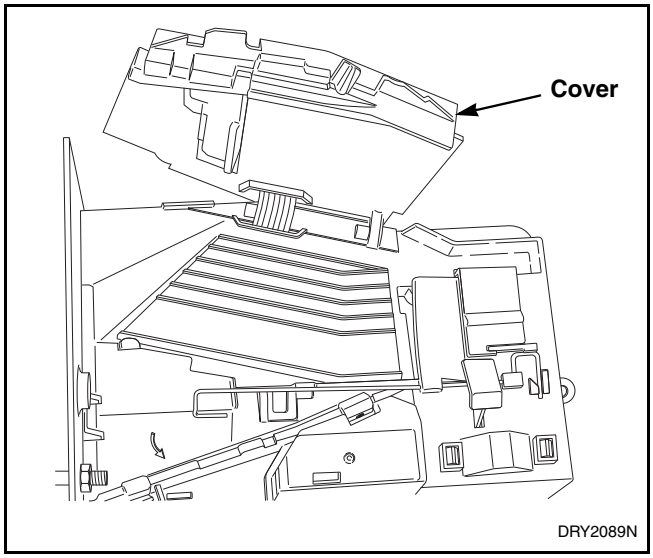

Figure 17

e. Clean the coin path with a soft brush and wipe exposed surfaces with an alcohol moistened cloth. Refer to *Figure 18*.

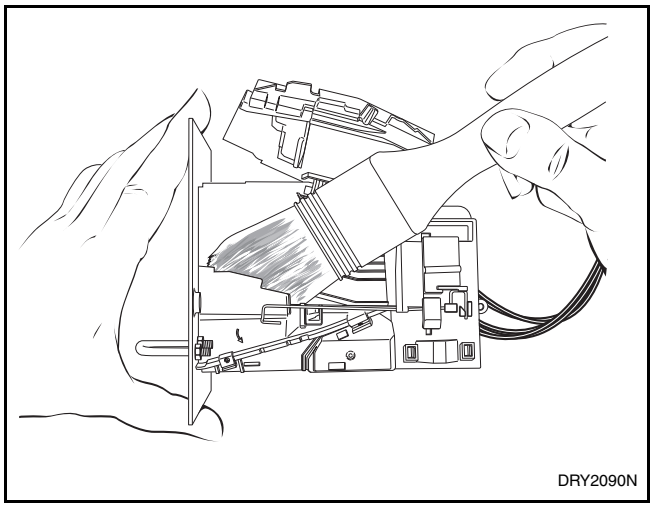

Figure 18

f. Clean residue from coin rail with an alcohol moistened cloth. Refer to *Figure 19*.

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WARNING

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W003

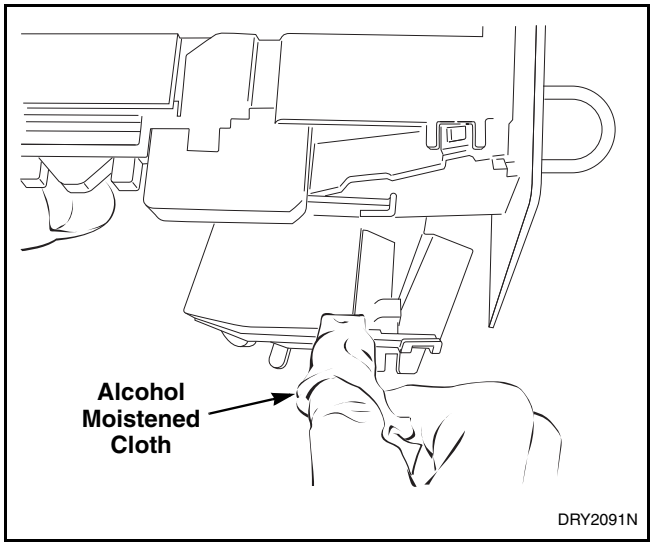

Figure 19

g. Clean light sensors with a soft brush or air spray duster. Refer to *Figure 20*.

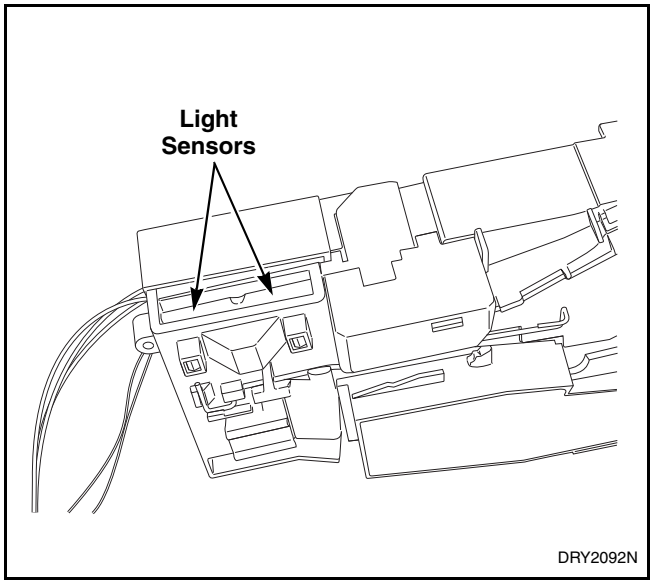

Figure 20

h. Close cover for coin drop.
i. Move spring back over cover catch.
j. Reinstall coin drop into machine.
k. Reconnect electrical power to machine and drop.
l. Add a coin to drop to verify that coin drop is operating properly and that electrical connection is working properly.

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Section 5
Motor Test Procedure

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
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- **Never start the washer with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer is properly grounded.**

W003

IMPORTANT: Disconnect base wire harness plug from motor.

WARNING

Disconnect electric power to washer before performing the following steps:

W188

Motor test procedures using an Ohm meter.

NOTE: Resistance readings slightly out of given ranges may be due to meter conditions. These readings DO NOT necessarily indicate motor failure.

Meter Connections		Reading Should Be	If Not
1.	Ground to Each Other Terminal	Open	Terminal shorted to ground.
2.	White to Yellow	Closed	Open thermal overload.
3.	Red to Brown	2-8 Ohms	Start winding open or resistance too high or too low.
4.	Blue to White	1-2 Ohms	High speed winding (4 pole) open or resistance too high or too low.
5.	Violet to White (2-speed motor)	2.5 Ohms (approximate)	Low winding open; High speed winding open; or resistance too high or too low.
6.	“R” to Red	Closed	Open start (auxiliary) switch.
7.	“P” to Blue (2-speed motor)	Closed	Open start switch 4 pole winding

NOTE: Steps 8, 9 and 10 are with motor centrifugal mechanism in the run position.

8.	“R” to Red	Open	Start auxiliary switch.
9.	“P” to Blue (2-speed motor)	3 Ohms (approximate)	Refer to Blue to White and Violet to White.
10.	“P” to Violet (2-speed motor)	Closed	Open low (6 pole) winding run switch.

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